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3. FOOD INTAKE

3.1 INTRODUCTION

Ingestion of contaminated foods is a potential pathway of exposure to toxic chemicals among children. Fruits, vegetables, and grains may become contaminated with toxic chemicals by several different pathways. Ambient pollutants from the air may be deposited on or absorbed by the plants, or dissolved in rainfall or irrigation waters that contact the plants. Pollutants may also be absorbed through plant roots from contaminated soil and ground water. The addition of pesticides, soil additives, and fertilizers may also result in food contamination. Meat, poultry, and dairy products can become contaminated if animals are exposed to contaminated media (i.e., soil, water, or feed crops). Contaminated finfish and shellfish are also potential sources of human exposure to toxic chemicals. Pollutants are carried in the surface waters, but also may be stored and accumulated in the sediments as a result of complex physical and chemical processes. Consequently, finfish and shellfish are exposed to these pollutants and may become sources of contaminated food. Intake rates for home produced food products are needed to assess exposure to local contaminants present in homegrown or home caught foods.

Exposure to children from food ingestion may differ from that of adults because of differences in the type and amounts of food eaten. Also, for many foods, the intake per unit body weight is greater for children than adults. The most common foods eaten by children include milk, nonfat solids; apple juice; apples, fresh; orange juice; pears, fresh; milk, fat, solids; peaches, fresh; carrots; beef, lean; milk sugar (lactose); bananas, fresh; rice, milled; peas, succulent, garden; beans, succulent, garden; oats; soybean oil; coconut oil; and wheat flour (Goldman, 1995).

The primary source of recent information on consumption rates of foods among children is the U.S. Department of Agriculture's (USDA) Nationwide Food Consumption Survey (NFCS) and the USDA Continuing Survey of Food Intakes by Individuals (CSFII). Data from the 1989-91 and 1994-96 CSFIIs have been used in various studies to generate children's per capita intake rates for both individual foods and the major food groups. Earlier studies have used USDA's Nationwide Food Consumption Survey (NFCS) from 1977/78 or 1987/88. Because data from the 1989-91 and 1994-96 CSFIIs are available, data from the older surveys are not reported here, except in the case of data on homegrown foods, which are based on the 1987/88 NFCS, and

serving size information, which is based on the 1977/78 NFCS. Older USDA data analyses can be found in *Exposure Factors Handbook* (U.S. EPA 1997).

It should be noted that a variety of terms may be used to define intake. These terms (e.g., consumer-only intake, per capita intake, as consumed intake, dry weight intake) are defined below to assist the reader in interpreting and using the intake rates that are appropriate for the exposure scenario being assessed. Consumer-only intake is defined as the quantity of foods consumed only by children who ate these food items during the survey period. Per capita intake rates are generated by averaging consumer-only intakes over the entire population of children (i.e., both users and non-users). In general, per capita intake rates are appropriate for use in exposure assessment for which average dose estimates for children are of interest because they represent both children who ate the foods during the survey period and children who may eat the food items at some time, but did not consume them during the survey period. Intake rates for the major food categories include all forms of that food type. For example, total fruit intake refers to the sum of all fruits consumed in a day including canned, dried, frozen, and fresh fruits. Likewise, total vegetable intake refers to the sum of all vegetables consumed in a day including canned, dried, frozen, and fresh vegetables.

Intake rates may be presented on an "as consumed" (e.g., cooked) basis or on the basis of an uncooked weight. As consumed intake rates (g/day) are based on the weight of the food in the form that it is consumed and should be used in assessments where the basis for the contaminant concentrations in foods is whole weight. When data are based on "as consumed" form, corrections to account for changes in portion sizes from cooking losses are generally not required. When dry weight contaminant concentrations in foods are available, dry weight intake rates must be used. Dry weight intake rates are based on the weight of the food consumed after the moisture content has been removed.

Estimating source-specific exposures to toxic chemicals in fruits and vegetables may also require information on the amount of fruits and vegetables that are exposed to or protected from contamination as a result of cultivation practices or the physical nature of the food product itself (i.e., those having protective coverings that are removed before eating would be considered protected), or the amount grown beneath the soil (i.e., most root crops such as potatoes). The percentages of foods grown above and below ground will be useful when the concentrations of contaminants in foods are estimated from concentrations in soil, water, and air. For example,

vegetables grown below ground may be more likely to be contaminated by soil pollutants, but leafy above ground vegetables may be more likely to be contaminated by deposition of air pollutants on plant surfaces.

The purpose of this section is to provide: (1) intake data for individual foods, the major food groups, and total foods among children, including homegrown foods; (2) guidance for converting between as consumed and dry weight intake rates; and (3) intake data for exposed and protected fruits and vegetables and those grown below ground. Recommendations are based on average and upper-percentile intake among the general population of the U.S.

3.2 INTAKE RATE DISTRIBUTIONS FOR VARIOUS FOOD TYPES

U.S. EPA (2000) - Analysis of USDA 1994-96 CSFII Data to Generate Intake Rates for Major Food Groups and Individual Foods - EPA's National Center for Environmental Assessment (NCEA) analyzed three years of data from USDA's CSFII to generate distributions of intake rates for various food items/groups. USDA conducts CSFII annually to "assess food consumption behavior and nutritional content of diets for policy implications relating to food production and marketing, food safety, food assistance, and nutrition education" (USDA, 1995). The survey uses a statistical sampling technique designed to ensure that all seasons, geographic regions of the U.S., and demographic and socioeconomic groups are represented. Using a stratified sampling technique, individuals of all ages living in selected households in the 50 states and Washington, D.C. were surveyed. Individuals provided 2 non-consecutive days of data, based on 24-hour recall. The 2-day response rate for the 1994-96 CSFII was approximately 76 percent. Data from the 1994 1995, and 1996 CFSII were combined into a single data set to increase the number of observations available for analysis. Approximately 15,000 individuals provided intake data over the three survey years (USDA, 1998).

The food groups selected for this analysis include the major food groups: total fruits, total vegetables, total grains, total meats, and total dairy. Individual foods include fruit and vegetable items such as: apples, bananas, peaches, pears, strawberries, and other berries; individual vegetables such as: asparagus, beets, broccoli, cabbage, carrots, corn, cucumbers, lettuce, lima beans, okra, onions, peas, peppers, pumpkin, snap beans, tomatoes, and white potatoes; fruits and vegetables categorized as exposed, protected and roots; and various USDA categories (i.e., citrus and other fruits, and dark green, deep yellow, and other vegetables). Individual meats include

beef, eggs, game, pork, and poultry; and individual grain items include breads, breadfast foods, cereals, pasta, rice, snacks, and sweets. Intake rates of total vegetables, tomatoes, and white potatoes, total meats, fish, beef, pork, poultry, dairy, eggs, and total grains were adjusted to account for the amount of these food items eaten as meat and grain mixtures as described in Appendix 3A. Food items/groups were identified in the CSFII data base according to USDA-defined food codes. Appendix 3B presents the codes used to determine the various food groups. Intake rates for these food items/groups represent intake of all forms of the product (i.e., home produced and commercially produced).

Individual identifiers in the database were used throughout the analysis to categorize populations according to demographics. These identifiers included identification number, age, body weight, weighting factor, and number of days that data were reported. Distributions of intake were determined for children who provided data for two days of the survey. Individuals who did not provide information on body weight, or for which identifying information was unavailable, were excluded from the analysis. Two-day average intake rates were calculated for all individuals in the database for each of the food items/groups. These average daily intake rates were divided by each individual's reported body weight to generate intake rates in units of g/kg-day. The data were also weighted according to the two-day weights provided in the 1994-96 CSFII. USDA sample weights are calculated to account for inherent biases in the sample selection process, and to adjust the sample population to reflect the national population. Summary statistics for individual intake rates were generated on a per capita basis. That is, both users and non-users of the food item were included in the analysis. Mean consumer only intake rates may be calculated by dividing the mean per capita intake rate by the percent of the population consuming the food item of interest. Intake data from the CSFII are based on "as eaten" (i.e., cooked or prepared) forms of the food items/groups. Thus, corrections to account for changes in portion sizes from cooking losses are not generally required. Summary statistics included are: number of weighted and unweighted observations, percentage of the population using the food item/group being analyzed, mean intake rate, standard error, and percentiles of the intake rate distribution (i.e., 0, 1, 5, 10, 25, 50, 75, 90, 95, 99, and 100th percentile). Data were provided for the total population using the food item being evaluated and for several age groups of children, including <1, 1-2, 3-5, 6-11, and 12-19 years. The total numbers of individuals in the

data set, by age group are presented in Table 3-1. The food analysis was accomplished using the SAS statistical programming system (SAS, 1990).

The results of this analysis are presented in Table 3-2 for total fruits, total vegetables, total grains, total meats, total fish, and total dairy products. Table 3-3 provides data for individual foods, and Table 3-4 for the various USDA categories. The data for exposed/protected and root food items are presented in Table 3-5. These tables are presented at the end of this Chapter. The results are presented in units of g/kg-day. Thus, use of these data in calculating potential dose does not require the body weight factor to be included in the denominator of the average daily dose (ADD) equation. It should be noted that converting these intake rates into units of g/day by multiplying by a single average body weight is inappropriate, because individual intake rates were indexed to the reported body weights of the survey respondents. However, if there is a need to compare the intake data presented here to intake data in units of g/day, a body weight for the age group of interest, as presented in Chapter 10 of this document should be used.

Short-term data are suitable for estimating mean average daily intake rates representative of both short-term and long-term consumption. However, the *distribution* of average daily intake rates generated using short-term data (e.g., 2-day) do not necessarily reflect the long-term *distribution* of average daily intake rates. The distributions generated from short-term and long-term data will differ to the extent that each individual's intake varies from day to day; the distributions will be similar to the extent that individual's intakes are constant from day to day.

Day to day variation in intake among individuals will be great for food item/groups that are highly seasonal and for items/groups that are eaten year around but that are not typically eaten every day. For these foods, the intake distribution generated from short-term data will not be a good reflection of the long-term distribution. On the other hand, for broad categories of foods (e.g., vegetables) which are eaten on a daily basis throughout the year with minimal seasonality, the short-term distribution may be a reasonable approximation of the true long-term distribution, although it will show somewhat more variability. Distributions are shown only for the major food groups and broad categories of foods. For individual foods, only the mean standard deviation and percent consuming are provided. Because of the increased variability of the short-term distribution, the short-term upper percentiles shown here will overestimate somewhat the corresponding percentiles of the long-term distribution.

The advantages of using the 1949-96 CSFII data set are that the data are expected to be generally representative of the U.S. population and that it includes data on a wide variety of food types. The data set is the most recent of a series of publicly available USDA data sets, and should reflect recent eating patterns in the United States. The data set includes three years of intake data combined and are based on a two-day survey period. Short-term dietary data may not accurately reflect long-term eating patterns. This is particularly true for the tails (extremes) of the distribution of food intake. In addition, the adjustment for including mixtures adds uncertainty to the intake rate distributions. The calculation for including mixtures assumes that intake of any mixture includes all of the foods identified in Appendix Table 3A-1 in the proportions specified in that table. This may under- or over-estimate intake of certain foods among some individuals.

3.3 FISH INTAKE RATES

3.3.1 General Population Studies

U.S. EPA (1996) - Daily Average Per Capita Fish Consumption Estimates Based on the Combined USDA 1989, 1990, and 1991 CSFII—EPA's Office of Water used the 1989, 1990, and 1991 CSFII data to generate fish intake estimates. Participants in the CSFII provided 3 consecutive days of dietary data. For the first day's data, participants supplied dietary recall information to an in-home interviewer. Second and third day dietary intakes were recorded by participants. Data collection for the CSFII started in April of the given year and was completed in March of the following year.

The CSFII contains 469 fish-related food codes; survey respondents reported consumption across 284 of these codes. Respondents estimated the weight of each food that they consumed. The fish component (by weight) of these foods was calculated using data from the recipe file for release 7 of the USDA's Nutrient Data Base for Individual Food Intake Surveys. The amount of fish consumed by each individual was then calculated by summing, over all fish containing foods, the product of the weight of food consumed and the fish component (i.e., the percentage fish by weight) of the food.

The recipe file also contains cooking loss factors associated with each food. These were utilized to convert, for each fish containing food, the as-eaten fish weight consumed into an uncooked equivalent weight of fish. Analyses of fish intake were performed on both an as-eaten and uncooked basis.

Each (fish-related) food code was assigned by EPA a habitat type of either freshwater/ estuarine or marine. Food codes were also designated as finfish or shellfish. Average daily individual consumption (g/day) for a given fish type-by-habitat category (e.g., marine finfish) was calculated by summing the amount of fish consumed by the individual across the three reporting days for all fish-related food codes in the given fish-by-habitat category and then dividing by 3. Individual consumption per day consuming fish (g/day) was calculated similarly except that total fish consumption was divided by the specific number of survey days the individual reported consuming fish; this was calculated for fish consumers only (i.e., those consuming fish on at least one of the three survey days). The reported body-weight of the individual was used to convert consumption in g/day to consumption in g/kg-day.

There were a total of 11,912 respondents in the combined data set who had three-day dietary intake data. Survey weights were assigned to this data set to make it representative of the U.S. population with respect to various demographic characteristics related to food intake.

U.S. EPA (1996) reported means, medians, upper percentiles, and 90-percent interval estimates for the 90th, 95th, and 99th percentiles. The 90-percent interval estimates are nonparametric estimates from bootstrap techniques. The bootstrap estimates result from the percentile method which estimates the lower and upper bounds for the interval estimate by the 100α percentile and 100 (1-α) percentile estimates from the non-parametric distribution of the given point estimate (U.S. EPA, 1996). Analyses of fish intake were performed on an as-eaten as well as on an uncooked equivalent basis and on a g/day and g/kg-day basis.

Table 3-6 presents data for daily average per capita fish consumption by age and gender in g/day and in mg/kg/day, as consumed. Table 3-7 provides consumer only data in units of g/day and mg/kg/day, as consumed. Tables 3-8 and 3-9 provide similar data on an uncooked basis. These data are presented by selected age groupings (4 and under and 15-44) and gender.

The advantages of this study are its large size, its relative currency and its representativeness. In addition, through use of the USDA recipe files, the analysis identified all fish-related food codes and estimated the percent fish content of each of these codes. By contrast, some analyses of the USDA National Food Consumption Surveys (NFCSs) which reported per capita fish intake rates (e.g., Pao et al., 1982; USDA, 1992), excluded certain fish containing foods (e.g., fish mixtures, frozen plate meals) in their calculations.

EPA, Office of Water, is currently in the process of analyzing data from the 1994, 1995, and 1996 CSFIIs. Total fish intake was estimated from the 1994-96 CSFII by EPA/NCEA (see Section 3.2). The EPA, Office of Water data will be in this Handbook when available.

Tuna Research Institute Survey - The Tuna Research Institute (TRI) funded a study of fish consumption which was performed by the National Purchase Diary (NPD) during the period of September, 1973 to August, 1974. The data tapes from this survey were obtained by the National Marine Fisheries Service (NMFS), which later, along with the FDA, USDA and TRI, conducted an intensive effort to identify and correct errors in the data base. Javitz (1980) summarized the TRI survey methodology and used the corrected tape to generate fish intake distributions for various sub-populations.

The TRI survey sample included 6,980 families who were currently participating in a syndicated national purchase diary panel, 2,400 additional families where the head of household was female and under 35 years old; and 210 additional black families (Javitz, 1980). Of the 9,590 families in the total sample, 7,662 families (25,162 individuals) completed the questionnaire, a response rate of 80 percent. The survey was weighted to represent the U.S. population based on a number of census-defined controls (i.e., census region, household size, income, presence of children, race and age). The calculations of means, percentiles, etc. were performed on a weighted basis with each person contributing in proportion to his/her assigned survey weight.

The survey population was divided into 12 different sample segments and, for each of the 12 survey months, data were collected from a different segment. Each survey household was given a diary in which they recorded, over a one month period, the date of any fish meals consumed and the following accompanying information: the species of fish consumed, whether the fish was commercially or recreationally caught, the way the fish was packaged (canned, frozen fresh, dried, smoked), the amount of fish prepared and consumed, and the number of servings consumed by household members and guests. Both meals eaten at home and away from home were recorded. The amount of fish prepared was determined as follows (Javitz, 1980): “For fresh fish, the weight was recorded in ounces and may have included the weight of the head and tail. For frozen fish, the weight was recorded in packaged ounces, and it was noted whether the fish was breaded or combined with other ingredients (e.g., TV dinners). For canned fish, the weight was recorded in packaged ounces and it was noted whether the fish was canned in water, oil, or with other ingredients (e.g., soups)”.

Javitz (1980) reported that the corrected survey tapes contained data on 24,652 individuals who consumed fish in the survey month and that tabulations performed by NPD indicated that these fish consumers represented 94 percent of the U.S. population. For this population of "fish consumers," Javitz (1980) calculated means and percentiles of fish consumption by age (Table 3-10). The overall mean fish intake rate among fish consumers was calculated at 6.2 g/day for ages 0-9 years and 10.1 g/day for ages 10-19 years. the 95th percentile fish ingestion rates were 16.5 g/day for ages 0-9 years and 26.8 g/day for ages 10-19 years.

The TRI survey data were also utilized by Rupp et al. (1980) to generate fish intake distributions for three age groups (<11, 12-18, and 19+ years) within each of the 9 census regions and for the entire United States. Separate distributions were derived for freshwater finfish, saltwater finfish and shellfish; thus, a total of 90 (3*3*10) different distributions were derived, each corresponding to intake of a specific category of fish for a given age group within a given region. The analysis of Rupp et al. (1980) included only those respondents with known age. This amounted to 23,213 respondents.

Ruffle et al. (1994) used the percentiles data of Rupp et al. (1980) to estimate the best fitting lognormal parameters for each distribution. Three methods (non-linear optimization, first probability plot and second probability plot) were used to estimate optimal parameters. Ruffle et al. (1994) determined that, of the three methods, the non-linear optimization method (NLO) generally gave the best results. For some of the distributions fitted by the NLO method, however, it was determined that the lognormal model did not adequately fit the empirical fish intake distribution. Ruffle et al. (1994) used a criterion of minimum sum of squares (min SS) less than 30 to identify which distributions provided adequate fits. Of the 90 distributions studied, 77 were seen to have min SS < 30; for these, Ruffle et al. (1994) concluded that the NLO modeled lognormal distributions are "well suited for risk assessment". Of the remaining 13 distributions, 12 had min SS > 30; for these Ruffle et al. (1994) concluded that modeled lognormal distributions "may also be appropriate for use when exercised with due care and with sensitivity analyses". One distribution, that of freshwater finfish intake for children < 11 years of age in New England, could not be modeled due to the absence of any reported consumption.

Table 3-11 presents the optimal lognormal parameters, the mean (μ), standard deviation (s), and min SS, for all 89 modeled distributions. These parameters can be used to determine percentiles of the corresponding distribution of average daily fish consumption rates through the

relation DFC(p)=exp[μ+ z(p)s] where DFC(p) is the pth percentile of the distribution of average daily fish consumption rates and z(p) is the z-score associated with the pth percentile (e.g., z(50)=0). The mean average daily fish consumption rate is given by exp[μ + 0.5s^2].

The analyses of Javitz (1980) and Ruffle et al. (1994) were based on consumers only, who are estimated to represent 94.0 percent of the U.S. population. U.S. EPA estimated the mean intake in the general population by multiplying the fraction consuming, 0.94, by the mean among consumers reported by Javitz (1980) of 14.3 g/day; the resulting estimate is 13.4 g/day. The 95th percentile estimate of Javitz (1980) of 41.7 g/day among consumers would be essentially unchanged when applied to the general population; 41.7 g/day would represent the 95.3 percentile (i.e., 100*[0.95*0.94+0.06]) among the general population.

Advantages of the TRI data survey are that it was a large, nationally representative survey with a high response rate (80 percent) and was conducted over an entire year. In addition, consumption was recorded in a daily diary over a one month period; this format should be more reliable than one based on one-month recall. The upper percentiles presented are derived from one month of data, and are likely to overestimate the corresponding upper percentiles of the long-term (i.e., one year or more) average daily fish intake distribution. Similarly, the standard deviation of the fitted lognormal distribution probably overestimates the standard deviation of the long-term distribution. However, the period of this survey (one month) is considerably longer than those of many other consumption studies, including the USDA National Food Consumption Surveys, which report consumption over a 3 day to one week period.

Another obvious limitation of this data base is that it is now over twenty years out of date. Ruffle et al. (1994) considered this shortcoming and suggested that one may wish to shift the distribution upward to account for the recent increase in fish consumption. Adding ln(1+x/100) to the log mean μ will shift the distribution upward by x percent (e.g., adding 0.22 = ln(1.25) increases the distribution by 25 percent). Although the TRI survey distinguished between recreationally and commercially caught fish, Javitz (1980), Rupp et al. (1980), and Ruffle et al. (1994) (which was based on Rupp et al., 1980) did not present analyses by this variable.

Tsang and Klepeis (1996) - National Human Activity Pattern Survey (NHAPS) - The U.S. EPA collected information for the general population on the duration and frequency of time spent in selected activities and time spent in selected microenvironments via 24-hour diaries. Over 9,000 individuals from 48 contiguous states participated in NHAPS. Approximately

4,700 participants also provided information on seafood consumption. Over 900 of these participants were children between the ages of 1 and 17 years. The survey was conducted between October 1992 and September 1994. Data were collected on the (1) number of people that ate seafood in the last month, (2) the number of servings of seafood consumed, and (3) whether the seafood consumed was caught or purchased (Tsang and Klepeis, 1996). The participant responses were weighted according to selected demographics such as age, gender, and race to ensure that results were representative of the U.S. population. Of the 900 children who participated in the survey, approximately 43 percent reportedly ate seafood (including shellfish, eels, or squid) in the last month. The number of servings per month were categorized in ranges of 1-2, 3-5, 6-10, 11-19, and 20+ servings per month (Table 3-12). The highest number of respondents for all ages of children had 1-2 servings per month. Most of the respondents purchased the seafood they ate (Table 3-12).

Intake data were not provided in the survey. However, intake of fish can be estimated using the information on the number of servings of fish eaten from this study and serving size data for each age group from other studies (e.g., Pao et al., 1982). Using this mean value for serving size and assuming that the average child eats 1-2 servings per month, the age-specific amount of seafood eaten per month can be estimated.

The advantages of NHAPS is that the data were collected for a large number of individuals and are representative of the U.S. general population. However, evaluation of seafood intake was not the primary purpose of the study and the data do not reflect the actual amount of seafood that was eaten. However, using the assumption described above, the estimated seafood intake from this study are comparable to those observed in the EPA CSFII analysis. It should be noted that an all inclusive description for seafood was not presented in Tsang and Klepeis (1996). It is not known if processed or canned seafood and seafood mixtures are included in the seafood category.

3.3.2 Freshwater Recreational Study

West et al. (1989) - Michigan Sport Anglers Fish Consumption Survey, 1989 - surveyed a stratified random sample of Michigan residents with fishing licences. The sample was divided into 18 cohorts, with one cohort receiving a mail questionnaire each week between January and May 1989. The survey included both a short term recall component recording respondents' fish intake

over a seven day period and a usual frequency component. For the short-term component, respondents were asked to identify all household members and list all fish meals consumed by each household member during the past seven days. The source of the fish for each meal was requested (self-caught, gift, market, or restaurant). Respondents were asked to categorize serving size by comparison with pictures of 8 oz. fish portions; serving sizes could be designated as either "about the same size", "less", or "more" than the 8 oz. picture. Data on fish species, locations of self-caught fish and methods of preparation and cooking were also obtained.

The usual frequency component of the survey asked about the frequency of fish meals during each of the four seasons and requested respondents to give the overall percentage of household fish meals that come from recreational sources. A sample of 2,600 individuals were selected from state records to receive survey questionnaires. A total of 2,334 survey questionnaires were deliverable and 1,104 were completed and returned, giving a response rate of 47.3 percent among individuals receiving questionnaires.

In the analysis of the survey data by West et. al. (1989), the authors did not attempt to generate the distribution of recreationally caught fish intake in the survey population. EPA obtained the raw data of this survey for the purpose of generating fish intake distributions and other specialized analyses.

As described elsewhere in this handbook, percentiles of the distribution of average daily intake reflective of long-term consumption patterns can not in general be estimated using short-term (e.g., one week) data. Such data can be used to estimate mean average daily intake rates (reflective of short or long term consumption); in addition, short term data can serve to validate estimates of usual intake based on longer recall.

EPA first analyzed the short term data with the intent of estimating mean fish intake rates. In order to compare these results with those based on usual intake, only respondents with information on both short term and usual intake were included in this analysis. For the analysis of the short term data, EPA modified the serving size weights used by West et al. (1989), which were 5, 8 and 10 oz., respectively, for portions that were less, about the same, and more than the 8 oz. picture. EPA examined the percentiles of the distribution of fish meal sizes reported in Pao et al. (1982) derived from the 1977-1978 USDA National Food Consumption Survey and observed that a lognormal distribution provided a good visual fit to the percentile data. Using this lognormal distribution, the mean values for serving sizes greater than 8 oz. and for serving sizes at

least 10 percent greater than 8 oz. were determined. In both cases a serving size of 12 oz. was consistent with the Pao et al. (1982) distribution. The weights used in the EPA analysis then were 5, 8, and 12 oz. for fish meals described as less, about the same, and more than the 8 oz. picture, respectively. It should be noted that the mean serving size from Pao et al. (1982) was about 5 oz., well below the value of 8 oz. most commonly reported by respondents in the West et al. (1989) survey.

Table 3-13 displays the mean number of total and recreational fish meals for each household member between age 1 and 20 years based on the seven day recall data. Also shown are mean fish intake rates derived by applying the weights described above to each fish meal. Intake was calculated on both a grams/day and grams/kg body weight/day basis. This analysis was restricted to individuals who eat fish and who reside in households reporting some recreational fish consumption during the previous year. About 75 percent of survey respondents (i.e., licensed anglers) and about 84 percent of respondents who fished in the prior year reported some household recreational fish consumption.

The advantages of this data set and analysis are that the survey was relatively large and contained both short-term and usual intake data. The response rate of this survey, 47 percent, was relatively low. This study was conducted in the winter and spring months of 1989. This period does not include the summer months when peak fishing activity can be anticipated, leading to the possibility that intake results based on the 7 day recall data may understate individuals' usual (annual average) fish consumption.

3.3.3 Native American Subsistence Study

Columbia River Inter-Tribal Fish Commission (CRITFC) (1994) - A Fish Consumption Survey of the Umatilla, Nez Perce, Yakama, and Warm Springs Tribes of the Columbia River Basin - CRITFC (1994) conducted a fish consumption survey among four Columbia River Basin Native American tribes during the fall and winter of 1991-1992. The target population included all adult tribal members who lived on or near the Yakama, Warm Springs, Umatilla or Nez Perce reservations. The survey was based on a stratified random sampling design where respondents were selected from patient registration files at the Indian Health Service. Interviews were performed in person at a central location on the member's reservation. Information for 204

children 5 years old and less was provided by the participating adult respondent. The overall response rate was 69 percent.

Information requested included annual and seasonal numbers of fish meals, average serving size per fish meal, species and part(s) of fish consumed, and preparation methods based on 24-hour dietary recall (CRITFC, 1994). Foam sponge food models approximating four, eight, and twelve ounce fish fillets were provided to help respondents estimate average fish meal size. Fish intake rates were calculated by multiplying the annual frequency of fish meals by the average serving size per fish meal.

The study was designed to give essentially equal sample sizes for each tribe. However, since the population sizes of the tribes were highly unequal, it was necessary to weight the data (in proportion to tribal population size) in order that the survey results represent the overall population of the four tribes. Such weights were applied to the analysis of adults; however, because the sample size for children was considered small, only an unweighted analysis was performed for this population (CRITFC, 1994).

A total of 49 percent of respondents of the total survey population reported that they caught fish from the Columbia River basin and its tributaries for personal use or for tribal ceremonies and distributions to other tribe members and 88 percent reported that they obtained fish from either self-harvesting, family or friends, at tribal ceremonies or from tribal distributions. Of all fish consumed, 41 percent came from self or family harvesting, 11 percent from the harvest of friends, 35 percent from tribal ceremonies or distribution, 9 percent from stores and 4 percent from other sources (CRITFC, 1994).

The analysis of seasonal intake showed that May and June tended to be high consumption months and December and January low consumption months. Table 3-14 gives the fish intake distribution for children under 5 years of age. The mean intake rate was 19.6 g/d and the 95th percentile was approximately 70 g/d.

The authors noted that some non-response bias may have occurred in the survey since respondents were more likely to live near the reservation and were more likely to be female than non-respondents. In addition, they hypothesized that non fish consumers may have been more likely to be non-respondents than fish consumers since non consumers may have thought their contribution to the survey would be meaningless; if such were the case, this study would overestimate the mean intake rate. It was also noted that the timing of the survey, which was

conducted during low fish consumption months, may have led to underestimation of actual fish consumption; the authors conjectured that an individual may report higher annual consumption if interviewed during a relatively high consumption month and lower annual consumption if interviewed during a relatively low consumption month. Finally, with respect to children's intake, it was observed that some of the respondents provided the same information for their children as for themselves, thereby the reliability of some of these data is questioned.

Although the authors have noted these limitations, this study does present information on fish consumption patterns and habits for a Native American subpopulation. It should be noted that the number of surveys that address subsistence subpopulations is very limited.

3.4 FAT INTAKE

Cresenta et al. (1988), Nicklas (1993), and Frank et al. (1986) analyzed dietary fat intake data as part of the Bogalusa heart study. The Bogalusa study "is an epidemiologic investigation of cardiovascular risk-factor variables and environmental determinants in a population that began 20 years ago" (Nicklas, 1995). The Bogalusa study has collected dietary data on subjects residing in Bogalusa, Louisiana, since 1973. Among other things, the study collected fat intake data for children, adolescents, and young adults. Researchers have examined various cohorts of subjects, including (1) six cohorts of 10-year olds, (2) two cohorts of 13-year olds, (3) one cohort of subjects from 6 months to 4 years of age, and (4) one cohort of subjects from 10 to 17 years of age (Nicklas, 1995). In order to collect the data, interviewers used the 24-hour dietary recall method. According to Nicklas (1995), "the diets of children in the Bogalusa study are similar to those reported in national studies of children." Thus, these data are useful in evaluating the variability of fat intake among the general population for the purposes of evaluating variability in exposure for dioxin-like compounds among this group. Data for 6-month old to 17-year old individuals collected during 1973 to 1982 are presented in Tables 3-15 and 3-16 (Frank et al., 1986). Data are presented for total fats, animal fats, vegetable fats, and fish fats in units of g/day and g/kg/day, respectively.

Total fat intake and intake of individual fat products was also estimated by EPA/NCEA using data from the 1994/96 CSFII. It should be noted that the fat intake rates presented here include all forms of fats (i.e., added fats such as butter and vegetable oil as well as fats consumed in meats and fish).

The Center for Disease Control (CDC) (1994) used data from NHANES III to calculate daily total food energy intake (TFEI), total dietary fat intake, and saturated fat intake for the U.S. population during 1988 to 1991. The sample population comprised 20,277 individuals ages 2 months and above, of which 14,001 respondents (73 percent response rate) provided dietary information based on a 24-hour recall. TFEI was defined as "all nutrients (i.e., protein, fat, carbohydrate, and alcohol) derived from consumption of foods and beverages (excluding plain drinking water) measured in kilocalories (kcal)." Total dietary fat intake was defined as "all fat (i.e., saturated and unsaturated) derived from consumption of foods and beverages measured in grams."

CDC (1994) estimated and provided data on the mean daily TFEI and the mean percentages of TFEI from total dietary fat grouped by age and gender. The overall mean daily TFEI was 2,095 kcal for the total population and 34 percent (or 82 g) of their TFEI was from total dietary fat (CDC, 1994). Based on this information, the mean daily fat intake was calculated for the various age groups and genders (see Appendix 3C for detailed calculation). Table 3-17 presents the grams of fat per day obtained from the daily consumption of foods and beverages grouped by age and gender for the U.S. population, based on this calculation.

3.5 TOTAL DIETARY INTAKE AND CONTRIBUTIONS TO DIETARY INTAKE

U.S. EPA (2000) - 1994-96 CSFII Total Diet Analysis. Using data from the 1994-1996 CSFII, total dietary intake was also evaluated. Total dietary intake was defined as intake of the sum of all foods in the following major food groups: dairy, eggs, meats, fish, fats, grains, vegetables, and fruits, using the same foods codes as those described in Appendix 3B, and the same method for allocation of mixtures as described in Appendix 3A. Beverages; sugar, candy, and sweets, and nuts and nut products were not included. Distributions of total dietary intake were generated, as described previously, for various age groups. Means, standard errors, and percentiles of total dietary intake were estimated in units of g/kg/day, as well as g/day.

To evaluate variability in the contributions of the major food groups to total dietary intake, individuals were ranked from lowest to highest, based on total dietary intake. Three subsets of individuals were defined, as follows: a group at the low end of the distribution of total intake (i.e., below the 10^{th} percentile of total intake), a central group (i.e., the 45^{th} to 55^{th}

percentile of total intake), and a group at the high end of the distribution of total intake (i.e., above the 90th percentile of total intake). Mean total dietary intake, mean intake of each of the major food groups, and the fraction of total dietary intake that each of these food groups represents was calculated for each of the three populations (i.e., individuals with low-end, central, and high-end total dietary intake). A similar analysis was conducted to estimate the contribution of the major food groups to total dietary intake for individuals at the low-end, central, and high-end of the distribution of total meat intake, total dairy intake, total meat and dairy intake, total fish intake, and fruit and vegetable intake. For example, to evaluate the variability in the diets of individuals at the low-end, central range, and high-end of the distribution of total meat intake, survey individuals were ranked according to their reported total meat intake. Three subsets of individuals were formed as described above. Mean total dietary intake, intake of the major food groups, and the fraction of total dietary intake represented by each of the major food groups were tabulated. This analysis was conducted for the following age groups of the population: <1 year, 1-2 years, 3-5 years, 6-11 years, and 12-19 years. The data were tabulated in units of g/kg/day and g/day.

Distributions of total dietary intake are presented in Table 3-18 in units of g/day and g/kg/day. Tables 3-19 and 3-20 compare total dietary intake to intake of the various major food groups for the various age groups in units of g/day and g/kg/day. Tables 3-21 through 3-26 present the contributions of the major food groups to total dietary intake for individuals (in the various age groups) at the low-end, central, and high-end of the distribution of total dietary intake, total meat intake, total meat and dairy intake, total fish intake, total fruit and vegetable intake, and total dairy intake in units of g/day and g/kg/day.

3.6 INTAKE OF HOME-PRODUCED FOODS

U.S. EPA (1997) - EPA's Analysis of the 1987/88 NFCS to Estimate Homegrown Intake Rates. NFCS data were used to generate intake rates for home produced foods. USDA conducts the NFCS every 10 years to analyze the food consumption behavior and dietary status of Americans (USDA, 1992). The most recent NFCS was conducted in 1987-88 (USDA, 1987-88). The survey used a statistical sampling technique designed to ensure that all seasons, geographic regions of the 48 conterminous states in the U.S., and socioeconomic and demographic groups were represented (USDA, 1994). There were two components of the NFCS. The household

component collected information over a seven-day period on the socioeconomic and demographic characteristics of households, and the types, amount, value, and sources of foods consumed by the household (USDA, 1994). The individual intake component collected information on food intakes of individuals within each household over a three-day period (USDA, 1993). The sample size for the 1987-88 survey was approximately 4,300 households (over 10,000 individuals). This is a decrease over the previous survey conducted in 1977-78 which sampled approximately 15,000 households (over 36,000 individuals) (USDA, 1994). The sample size was lower in the 1987-88 survey as a result of budgetary constraints and low response rate (i.e., 38 percent for the household survey and 31 percent for the individual survey) (USDA, 1993). However, NFCS data from 1987-88 were used to generate homegrown intake rates because they were the most recent data available and were believed to be more reflective of current eating patterns among the U.S. population.

The USDA data were adjusted by applying the sample weights calculated by USDA to the data set prior to analysis. The USDA sample weights were designed to "adjust for survey non-response and other vagaries of the sample selection process" (USDA, 1987-88). Also, the USDA weights are calculated "so that the weighted sample total equals the known population total, in thousands, for several characteristics thought to be correlated with eating behavior" (USDA, 1987-88).

For the purposes of this study, home produced foods were defined as homegrown fruits and vegetables, meat and dairy products derived from consumer-raised livestock or game meat, and home caught fish. The food items/groups selected for analysis included major food groups such as total fruits, total vegetables, total meats, total dairy, total fish and shellfish. Individual food items for which >30 households reported eating the home produced form of the item, fruits and vegetables categorized as exposed, protected, and roots, and various USDA fruit and vegetable subcategories (i.e., dark green vegetables, citrus fruits, etc.) were also evaluated for the general population (U.S. EPA, 1997). However, age-specific data for children are not presented here because of the small numbers of observations for children eating individual homegrown foods in the data set. Food items/groups were identified in the NFCS data base according to NFCS-defined food codes. Appendix 3D presents the codes used to determine the various food groups.

Although the individual intake component of the NFCS gives the best measure of the amount of each food group eaten by each individual in the household, it could not be used directly

to measure consumption of home produced food because the individual component does not identify the source of the food item (i.e., as home produced or not). Therefore, an analytical method which incorporated data from both the household and individual survey components was developed to estimate individual home produced food intake. The USDA household data were used to determine (1) the amount of each home produced food item used during a week by household members and (2) the number of meals eaten in the household by each household member during a week. Note that the household survey reports the total amount of each food item used in the household (whether by guests or household members); the amount used by household members was derived by multiplying the total amount used in the household by the proportion of all meals served in the household (during the survey week) that were consumed by household members.

The individual survey data were used to generate average sex- and age-specific serving sizes for each food item. The age categories used in the analysis were as follows: 1 to 2 years; 3 to 5 years; 6 to 11 years; 12 to 19 years (intake rates were not calculated for children under 1; the rationale for this is discussed below). These serving sizes were used during subsequent analyses to generate homegrown food intake rates for individual household members. Assuming that the proportion of the household quantity of each homegrown food item/group was a function of the number of meals and the mean sex- and age-specific serving size for each family member, individual intakes of home produced food were calculated for all members of the survey population using SAS programming in which the following general equation was used:

$$w_i = w_f \left[\frac{m_i q_i}{\sum_{i=1}^{n} m_i q_i} \right] \qquad \text{(Eqn. 3-1)}$$

where:

- w_i = Homegrown amount of food item/group attributed to member i during the week (g/week);
- W_f = Total quantity of homegrown food item/group used by the family members (g/week);
- m_i = Number of meals of household food consumed by member i during the week (meals/week); and

q_i = Serving size for an individual within the age and sex category of the member (g/meal).

Daily intake of a homegrown food item/group was determined by dividing the weekly value (w_i) by seven. Intake rates were indexed to the self-reported body weight of the survey respondent and reported in units of g/kg-day. Intake rates were not calculated for children under one year of age because their diet differs markedly from that of other household members, and thus the assumption that all household members share all foods would be invalid for this age group.

For the major food groups (fruits, vegetables, meats, dairy, and fish) consumed by at least 30 households, distributions of home produced intake among consumers were generated by age group. Consumers were defined as members of survey households who reported consumption of the food item/group of interest during the one week survey period. Finally, the percentages of total intake of the food items/groups consumed within survey households that can be attributed to home production were tabulated. The percentage of intake that was homegrown was calculated as the ratio of total intake of the homegrown food item/group by the survey population to the total intake of all forms of the food by the survey population. As discussed previously, percentiles of average daily intake derived from short time intervals (e.g., 7 days) will not, in general, be reflective of long term patterns.

The intake data presented here for consumers of home produced foods and the total number of individuals surveyed may be used to calculate the mean and the percentiles of the distribution of home produced food consumption in the overall population (consumers and non-consumers) as follows:

Assuming that IR_p is the homegrown intake rate of food item/group at the p^{th} percentile and N_c is the weighted number of individuals consuming the homegrown food item, and N_T is the weighted total number of individuals surveyed, then $N_T - N_c$ is the weighted number of individuals who reported zero consumption of the food item. In addition, there are ($p/100 \times N_c$) individuals below the p^{th} percentile. Therefore, the percentile that corresponds to a particular intake rate (IR_p) for the overall distribution of homegrown food consumption (including consumers and nonconsumers) can be obtained by:

$$P^{th}_{overall} = 100 \times \frac{\left(\frac{P}{100} \times N_C + \left(N_T - N_C\right)\right)}{N_T} \qquad \text{(Eqn. 3-2)}$$

Table 3-27 displays the weighted numbers N_T, as well as the unweighted total survey sample sizes, for each subcategory and overall. It should be noted that the total unweighted number of observations in Table 3-27 (9,852) is somewhat lower than the number of observations reported by USDA because this study only used observations for family members for which age and body weight were specified.

Table 3-28 present homegrown intake rates for fruits, vegetables, meats, and fish, respectively. As mentioned above, the intake rates derived in this section are based on the amount of household food consumption. As measured by the NFCS, the amount of food "consumed" by the household is a measure of consumption in an economic sense, i.e., a measure of the weight of food brought into the household that has been consumed (used up) in some manner. In addition to food being consumed by persons, food may be used up by spoiling, by being discarded (e.g., inedible parts), through cooking processes, etc.

USDA estimated preparation losses for various foods (USDA, 1975). For meats, a net cooking loss, which includes dripping and volatile losses, and a net post cooking loss, which involves losses from cutting, bones, excess fat, scraps and juices, were derived for a variety of cuts and cooking methods. For each meat type (e.g., beef) EPA has averaged these losses across all cuts and cooking methods to obtain a mean net cooking loss and a mean net post cooking loss. Mean values for all meats and fish are provided in Table 3-29. For individual fruits and vegetables, USDA (1975) also gave cooking and post-cooking losses. These data, averaged across all types of fruits and vegetables to give mean net cooking and post cooking losses are also provided in Table 3-29.

The following formula can be used to convert the homegrown intake rates tabulated here to rates reflecting actual consumption:

$$I_A = I \times \left(1 - L_1\right) \times \left(1 - L_2\right) \qquad \text{(Eqn. 3-3)}$$

where I_A is the adjusted intake rate, I is the tabulated intake rate, L_1 is the cooking or preparation loss, and L_2 is the post-cooking loss. For fruits, corrections based on postcooking losses only apply to fruits that are eaten in cooked forms. For raw forms of the fruits, paring or preparation loss data should be used to correct for losses from removal of skin, peel, core, caps, pits, stems, and defects, or draining of liquids from canned or frozen forms.

In calculating ingestion exposure, assessors should use consistent forms in combining intake rates with contaminant concentrations, as previously discussed.

3.7 SERVING SIZE STUDY BASED ON THE USDA NFCS

Pao et al. (1982) - Foods Commonly Eaten by Individuals - Using data gathered in the 1977-78 USDA NFCS, Pao et al. (1982) calculated distributions for the quantities of individual fruit and vegetables consumed per eating occasion by members of the U.S. population (i.e., serving sizes), over a 3-day period. The data were collected during NFCS home interviews of 37,874 respondents, who were asked to recall food intake for the day preceding the interview, and record food intake the day of the interview and the day after the interview.

Serving size data are presented on an as consumed (g/day) basis in Table 3-30 for various age groups of the population. Only the mean and standard deviation serving size data and percent of the population consuming the food during the 3-day survey period are presented in this handbook. Percentiles of serving sizes of the foods consumed by these age groups of the U.S. population can be found in Pao et al. (1982).

The advantages of using these data are that they were derived from the USDA NFCS and are representative of the U.S. population. This data set provides serving sizes for a number of commonly eaten foods, but the list of foods is limited and does not account for fruits and vegetables included in complex food dishes. Also, these data represent the quantity of foods consumed per eating occasion. Although these estimates are based on USDA NFCS 1977-78 data, serving size data have been collected but not published for the more recent USDA surveys. These estimates may be useful for assessing acute exposures to contaminants in specific foods, or other assessments where the amount consumed per eating occasion is necessary. However, it should be noted that serving sizes may have changed since the data were collected in 1977-78.

3.8 CONVERSION BETWEEN AS CONSUMED AND DRY WEIGHT INTAKE RATES

As noted previously, intake rates may be reported in terms of units as consumed or units of dry weight. It is essential that exposure assessors be aware of this difference so that they may ensure consistency between the units used for intake rates and those used for concentration data (i.e., if the unit of food consumption is grams dry weight/day, then the unit for the amount of pollutant in the food should be grams dry weight).

If necessary, as consumed intake rates may be converted to dry weight intake rates using the moisture content percentages presented in Table 3-31 and Table 3-32 and the following equation:

$$IR_{dw} = IR_{ac} * [(100 - W)/100] \quad \text{(Eqn. 3-4)}$$

"Dry weight" intake rates may be converted to "as consumed" rates by using:

$$IR_{ac} = IR_{dw} / [(100 - W)/100] \quad \text{(Eqn. 3-5)}$$

where:

IR_{dw} = dry weight intake rate;

IR_{ac} = as consumed intake rate; and

W = percent water content.

3.9 FAT CONTENT OF MEAT AND DAIRY PRODUCTS

In some cases, the residue levels of contaminants in meat and dairy products are reported as the concentration of contaminant per gram of fat. This may be particularly true for lipophilic compounds. When using these residue levels, the assessor should ensure consistency in the exposure assessment calculations by using consumption rates that are based on the amount of fat consumed for the meat or dairy product of interest. Alternately, residue levels for the "as consumed" portions of these products may be estimated by multiplying the levels based on fat by the fraction of fat per product as follows:

$$\frac{\text{residue level}}{\text{g-product}} = \frac{\text{residue level}}{\text{g-fat}} \times \frac{\text{g-fat}}{\text{g-product}} \qquad \text{(Eqn. 3-6)}$$

The resulting residue levels may then be used in conjunction with "as consumed" consumption rates. The percentages of lipid fat in meat and dairy products have been reported in various publications. USDA's Agricultural Handbook Number 8 (USDA, 1979-1986) provides composition data for agricultural products. It includes a listing of the total saturated, monounsaturated, and polyunsaturated fats for various meat and dairy items. Table 3-33 presents the total fat content for selected meat and dairy products taken from Handbook Number 8. The total percent fat content is based on the sum of saturated, monounsaturated, and polyunsaturated fats.

The National Livestock and Meat Board (NLMB) (1993) used data from Agricultural Handbook Number 8 to estimate total fat content in grams, based on a 3-ounce (85.05 g) cooked serving size, and the corresponding percent fat content values for several categories of meats (Table 3-34). NLMB (1993) also reported that 0.17 grams of fat are consumed per gram of meat (i.e., beef, pork, lamb, veal, game, processed meats, and variety meats) (17 percent) and 0.08 grams of fat are consumed per gram of poultry (8 percent).

3.10 RECOMMENDATIONS

The 1994-96 CSFII data described in this section were used in selecting recommended intake rates for most food groups for general population children. For fish intake among general population children, the 1989-91 CSFII analyses were used to recommend intake rates. For recreational fish intake and intake among Native American populations, the data for children are limited. Fat intake data are also limited. The studies that address these populations should be used in exposure assessments where these populations are of interest (see Tables 3-13 and 3-17). Table 3-35 presents a summary of the recommended values for food intake and Table 3-36 presents the confidence ratings for the food intake (including fish) recommendations for general population children. Table 3-37 present the confidence ratings for fish intake recommendations for the freshwater recreational population and Table 3-38 for Native American subsistence populations. Per capita intake rates for specific food items, on a g/kg-day basis, may be obtained

from Table 3-3. Percentiles of the per capita intake rate distributions for the major food groups in the general population are presented in Table 3-2. It is important to note that these distributions are based on data collected over a 2-day period and may not necessarily reflect the long-term distribution of average daily intake rates. However, for these broad categories of food, because they are eaten on a daily basis throughout the year with minimal seasonality, the short term distribution may be a reasonable approximation of the long-term distribution, although it will display somewhat increased variability. This implies that the upper percentiles shown here will tend to overestimate the corresponding percentiles of the true long-term distribution.

3.11 REFERENCES FOR CHAPTER 3

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Table 3-1. Weighted and Unweighted Number of Observations, 1994/96 CSFII Analysis

Population Group	Weighted Number of Observations	Unweighted Number of Observations
Total	261,897,260	15,303
Age Group (years)		
< 01	3,772,296	359
01-02	8,270,523	1,356
03-05	12,376,836	1,435
06-11	23,408,882	1,432
12-19	29,657,098	1,398
20-39	81,672,622	2,992
40-69	81,480,145	4,921
70+	21,258,858	1,410
Season		
Fall	65,474,320	3,653
Spring	65,474,321	4,015
Summer	65,474,320	4,143
Winter	65,474,299	3,492
Urbanization		
Central City	83,904,160	4,600
Nonmetropolitan	55,263,514	3,778
Suburban	122,729,586	6,925
Race		
Asian	7,764,799	387
Black	33,466,094	1,963
Native American	1,669,637	115
Other/NA	14,321,336	972
White	204,675,394	11,866
Region		
Midwest	61,512,403	3,658
Northeast	51,416,379	2,737
South	91,294,341	5,474
West	57,674,137	3,434

Table 3-2. Per Capita Intake of the Major Food Groups (g/kg-day as consumed)

Population Group	Percent Consuming	MEAN	SE	P1	P5	P10	P25	P50	P75	P90	P95	P99	P100
Fruits													
Age (years)													
< 01	56.8%	13.18	1.106	0	0	0	0	7.559	22.67	35.69	41.18	63.73	110.2
1-2	85.5%	19.31	0.521	0	0	0	6.351	15.52	27.45	41.62	53.9	77.26	125.3
3-5	79.0%	11.02	0.341	0	0	0	2.273	8.102	16.34	26.44	32.68	52.99	105.2
6-11	71.2%	5.393	0.2	0	0	0	0	3.351	7.874	13.63	17.95	28.45	44.57
12-19	60.7%	2.771	0.133	0	0	0	0	1.371	4.116	7.978	10.97	16.64	32.23
Vegetables													
Age (years)													
< 01	50.1%	6.902	0.721	0	0	0	0	2.337	12.23	17.86	24.18	36.28	102.6
1-2	95.4%	9.528	0.213	0	0.471	1.929	4.534	8.013	12.58	18.72	23.28	33.46	83.29
3-5	92.7%	7.295	0.159	0	0	1.348	3.411	6.231	9.69	13.93	18.27	28.99	45.54
6-11	93.2%	5.337	0.118	0	0	1.12	2.48	4.334	7.103	10.44	13.54	21.21	52.27
12-19	97.9%	4.034	0.085	0	0.633	1.121	2.14	3.404	5.145	7.399	9.346	14.68	42.43
Grains													
Age (years)													
< 01	64.9%	4.124	0.416	0	0	0	0	1.575	5.438	12.97	20.24	26.61	40.13
1-2	95.6%	11.21	0.202	0	1.686	3.594	6.434	9.807	14.27	21.04	24.71	34.67	47.99
3-5	93.1%	10.29	0.197	0	0	3.674	6.292	9.177	13.13	17.77	21.07	33.64	120.9
6-11	93.4%	7.2	0.122	0	0	2.452	4.285	6.656	9.413	12.92	15.55	19.89	36.3
12-19	98.2%	4.401	0.08	0	1.13	1.543	2.452	3.788	5.541	7.899	9.702	14.08	34.57
Meats													
Age (years)													
< 01	32.3%	1.132	0.198	0	0	0	0	0	1.383	3.87	5.853	10.59	12.37
1-2	94.0%	4.422	0.094	0	0	0.759	1.909	3.845	6.195	8.869	10.16	14.66	24.44
3-5	92.2%	4.144	0.08	0	0	0.768	2.125	3.814	5.624	7.847	9.436	13.1	20.74
6-11	92.4%	2.919	0.06	0	0	0.523	1.418	2.52	3.996	5.555	6.802	10.23	17.6
12-19	97.3%	2.158	0.046	0	0.266	0.527	1.106	1.947	2.835	3.93	4.865	7.459	26.75
Fish													
Age (years)													
< 01	20.9%	0.108	0.047	0	0	0	0	0	0	0.325	0.527	1.562	4.685
1-2	58.2%	0.368	0.037	0	0	0	0	0.08	0.286	0.783	1.791	4.687	14.42
3-5	56.4%	0.316	0.03	0	0	0	0	0.069	0.245	0.661	1.736	4.567	9.553
6-11	57.5%	0.259	0.025	0	0	0	0	0.058	0.178	0.479	1.346	4.234	6.686
12-19	62.9%	0.204	0.017	0	0	0	0	0.055	0.172	0.417	1.1	2.499	5.354
Dairy Products													
Age (years)													
< 01	83.6%	111.4	4.855	0	0	2.522	63.89	102.2	158.6	197.8	235.3	318.3	576.3
1-2	95.7%	37.48	0.779	0	0.412	6.677	17.75	31.76	51.44	73.89	90.15	132.8	182.8
3-5	92.9%	20.91	0.402	0	0	3.473	10.18	18.73	29.16	41.24	48.75	66.16	89.72
6-11	93.3%	13.92	0.276	0	0	2.167	6.438	12.35	19.25	27.34	33.46	43.43	80.78
12-19	96.9%	6.119	0.16	0	0.168	0.413	1.832	4.467	8.803	13.49	17.79	27.84	38.01

Note: SE = Standard error
P = Percentile of the distribution
Source: Based on EPA's analyses of the 1994-96 CSFII

Table 3-3. Per Capita Intake of Individual Foods (g/kg-day as consumed)

Population Group	Percent Consuming	Mean	SE	Percent Consuming	Mean	SE	Percent Consuming	Mean	SE	Percent Consuming	Mean	SE	Percent Consuming	Mean	SE
	Apples			Asparagus			Bananas			Beets			Broccoli		
Age (years)															
< 01	41.2%	7.03	0.977	0.0%	0	0	21.4%	1.153	0.342	0.6%	0.032	0.247	1.1%	0.017	0.11
01-02	55.1%	8.02	0.448	0.7%	0.014	0.082	35.0%	1.688	0.138	0.4%	0.004	0.035	8.6%	0.242	0.095
03-05	47.7%	4.103	0.273	0.7%	0.009	0.041	20.8%	0.713	0.095	0.6%	0.012	0.051	7.8%	0.137	0.06
06-11	34.1%	1.437	0.135	0.8%	0.014	0.065	14.2%	0.353	0.073	0.3%	0.003	0.033	6.8%	0.108	0.055
12-19	20.0%	0.582	0.093	0.3%	0.003	0.022	9.4%	0.119	0.037	0.2%	0.001	0.015	5.8%	0.064	0.036
	Cabbage			Carrots			Corn			Cucumbers			Lettuce		
Age (years)															
< 01	0.6%	0.023	0.209	12.3%	0.678	0.348	2.2%	0.164	0.355	0.3%	0	0.011	0.0%	0	0
01-02	3.8%	0.071	0.07	14.5%	0.343	0.177	18.5%	0.462	0.097	6.9%	0.089	0.054	11.0%	0.109	0.035
03-05	5.7%	0.099	0.06	15.1%	0.182	0.043	19.2%	0.426	0.071	11.2%	0.13	0.059	18.9%	0.166	0.029
06-11	6.7%	0.074	0.04	17.8%	0.153	0.032	21.0%	0.316	0.046	14.7%	0.123	0.038	24.7%	0.184	0.027
12-19	5.8%	0.039	0.024	13.1%	0.057	0.019	12.8%	0.144	0.036	15.2%	0.094	0.037	35.6%	0.177	0.018
	Lima Beans			Okra			Onions			Other Berries			Peaches		
Age (years)															
< 01	0.3%	0	0.008	0.0%	0	0	0.3%	0.007	0.135	0.3%	0.005	0.068	12.8%	0.856	0.393
01-02	1.6%	0.037	0.074	1.0%	0.01	0.041	4.1%	0.019	0.021	1.5%	0.073	0.229	9.7%	0.447	0.145
03-05	0.8%	0.01	0.044	0.3%	0.006	0.084	4.7%	0.022	0.021	1.7%	0.034	0.084	7.2%	0.248	0.117
06-11	1.0%	0.018	0.057	0.8%	0.008	0.03	6.7%	0.026	0.017	1.8%	0.029	0.057	5.6%	0.125	0.077
12-19	0.5%	0.007	0.062	0.7%	0.003	0.018	12.9%	0.044	0.015	1.4%	0.016	0.043	4.0%	0.064	0.051
	Pears			Peas			Peppers			Pumpkins			Snap Beans		
Age (years)															
< 01	14.8%	1.354	0.49	9.2%	0.603	0.313	0.3%	0.001	0.014	7.5%	0.433	0.383	11.7%	0.624	0.267
01-02	8.5%	0.393	0.159	12.3%	0.257	0.072	1.5%	0.007	0.015	1.0%	0.054	0.172	19.4%	0.49	0.086
03-05	5.0%	0.178	0.114	9.1%	0.163	0.054	3.1%	0.018	0.023	0.3%	0.003	0.034	15.3%	0.239	0.05
06-11	5.2%	0.114	0.07	7.8%	0.111	0.049	4.7%	0.018	0.015	0.1%	0.001	0.017	12.2%	0.16	0.057
12-19	1.7%	0.023	0.039	5.6%	0.06	0.037	7.4%	0.018	0.01	0.1%	0.002	0.039	7.9%	0.063	0.024
	Strawberries			Tomatoes			White Potatoes			Breads			Breakfast Foods (Grains)		
Age (years)															
< 01	0.6%	0.007	0.086	28.7%	0.518	0.119	27.6%	0.537	0.151	15.0%	0.256	0.114	1.7%	0.048	0.162
01-02	4.4%	0.116	0.091	88.8%	2.139	0.076	77.4%	2.245	0.1	76.9%	1.95	0.063	19.5%	0.429	0.066
03-05	4.4%	0.096	0.081	87.7%	1.741	0.059	77.6%	2.027	0.085	85.6%	2.289	0.054	21.5%	0.391	0.055
06-11	4.5%	0.064	0.053	89.4%	1.217	0.037	79.0%	1.51	0.058	87.0%	1.698	0.04	21.9%	0.37	0.045
12-19	3.8%	0.032	0.026	94.8%	1.01	0.025	84.3%	1.243	0.049	86.4%	1.068	0.026	12.7%	0.13	0.031
	Cereals (Baby)			Cereals (Cooked)			Cereals (Ready-to-Eat)			Pasta			Rice		

Table 3-3. Per Capita Intake of Individual Foods (g/kg-day as consumed) (continued)

Population Group	Percent Consuming	Mean	SE	Percent Consuming	Mean	SE	Percent Consuming	Mean	SE	Percent Consuming	Mean	SE	Percent Consuming	Mean	SE
Age (years)															
< 01	52.9%	1.595	0.265	5.6%	0.931	0.819	8.6%	0.059	0.048	2.5%	0.066	0.149	3.9%	0.167	0.283
1-2	6.5%	0.162	0.095	16.6%	1.618	0.286	65.0%	0.965	0.039	16.2%	0.795	0.152	19.1%	0.905	0.166
3-5	0.3%	0.004	0.055	14.7%	1.26	0.283	68.5%	1.1	0.038	12.5%	0.552	0.128	16.3%	0.795	0.179
6-11	0.1%	0	0.002	8.7%	0.471	0.171	63.1%	0.794	0.031	12.3%	0.488	0.115	16.1%	0.492	0.098
12-19	0.0%	0	0	5.9%	0.164	0.09	44.6%	0.36	0.023	12.1%	0.264	0.088	17.2%	0.462	0.105
	Snacks (Grains)			Sweets (Grains)			Beef			Eggs			Game		
Age (years)															
< 01	13.9%	0.135	0.063	10.6%	0.158	0.096	29.0%	0.508	0.111	29.0%	0.405	0.142	0.0%	0	0
1-2	57.5%	0.738	0.039	53.9%	1.155	0.066	88.9%	1.389	0.045	88.8%	1.174	0.055	0.5%	0.009	0.067
3-5	54.5%	0.701	0.042	62.1%	1.342	0.064	86.1%	1.311	0.042	84.5%	0.65	0.037	0.6%	0.009	0.054
6-11	51.0%	0.461	0.03	63.4%	1.151	0.055	87.7%	1.073	0.035	85.3%	0.4	0.025	1.0%	0.013	0.053
12-19	45.6%	0.287	0.022	54.6%	0.621	0.033	92.9%	0.917	0.033	91.0%	0.286	0.015	0.8%	0.006	0.027
	Pork			Poultry			Butter			Margarine			Dressing		
Age (years)															
< 01	29.0%	0.092	0.03	30.4%	0.35	0.1	1.1%	0.002	0.007	2.2%	0.004	0.011	0.8%	0.003	0.02
01-02	86.7%	0.4	0.025	89.7%	1.408	0.051	12.9%	0.034	0.01	30.1%	0.073	0.009	11.7%	0.062	0.02
03-05	84.5%	0.375	0.024	88.1%	1.307	0.047	13.7%	0.04	0.01	31.6%	0.085	0.009	18.3%	0.084	0.016
06-11	85.0%	0.265	0.016	87.8%	0.829	0.032	14.9%	0.03	0.008	31.4%	0.062	0.007	23.1%	0.094	0.013
12-19	90.2%	0.209	0.011	93.3%	0.619	0.022	11.6%	0.015	0.005	24.0%	0.034	0.005	24.2%	0.08	0.011
	Mayonnaise			Sauce			Vegetable Oil								
Age (years)															
< 01	0.6%	0.001	0.005	0.0%	0	0	0.6%	0.005	0.057						
01-02	9.1%	0.024	0.01	0.4%	0.004	0.025	0.4%	0.001	0.014						
03-05	14.8%	0.036	0.008	0.8%	0.003	0.016	0.7%	0.002	0.007						
06-11	16.4%	0.028	0.006	0.7%	0.003	0.013	0.4%	0.001	0.008						
12-19	21.5%	0.032	0.005	1.3%	0.005	0.012	0.5%	0	0.002						

NOTE: SE = Standard error
P = Percentile of the distribution
Source: Based on EPA's analyses of the 1989-91 CSFII

Table 3-4. Per Capita Intake of USDA Categories of Vegetables and Fruits (g/kg-day as consumed)

Population Group	Percent Consuming	MEAN	SE	P1	P5	P10	P25	P50	P75	P90	P95	P99	P100
Dark Green Vegetables													
Age (years)													
< 01	1.7%	0.045	0.219	0	0	0	0	0	0	0	0	0.678	9.77
1-2	12.5%	0.328	0.098	0	0	0	0	0	0	0.845	2.315	6.513	20.94
3-5	10.9%	0.197	0.063	0	0	0	0	0	0	0.224	1.488	4.127	12.72
6-11	9.9%	0.154	0.054	0	0	0	0	0	0	0.162	1.042	3.655	6.761
12-19	9.4%	0.124	0.041	0	0	0	0	0	0	0.15	0.935	2.792	4.333
Deep Yellow Vegetables													
Age (years)													
< 01	4.5%	0.162	0.217	0	0	0	0	0	0	0	0.372	5.708	7.862
1-2	15.2%	0.276	0.065	0	0	0	0	0	0	0.728	2.131	4.235	11.72
3-5	16.9%	0.243	0.051	0	0	0	0	0	0	0.716	1.729	4.299	8.268
6-11	19.3%	0.18	0.035	0	0	0	0	0	0	0.658	1.18	2.45	10.84
12-19	14.3%	0.071	0.021	0	0	0	0	0	0	0.152	0.506	1.387	4.85
Citrus Fruits													
Age (years)													
< 01	4.5%	0.213	0.392	0	0	0	0	0	0	0	0	8.578	30.25
1-2	37.7%	4.018	0.341	0	0	0	0	0	5.741	12.87	18.71	37.07	113.4
3-5	38.9%	2.946	0.22	0	0	0	0	0	4.704	9.308	13.03	21.21	66.54
6-11	35.0%	1.9	0.163	0	0	0	0	0	2.745	6.329	9.465	16.74	27.94
12-19	36.1%	1.409	0.121	0	0	0	0	0	1.92	4.652	7.16	12.87	17.93
Other Fruits													
Age (years)													
< 01	55.4%	12.93	1.11	0	0	0	0	7.266	22.67	35.38	41.18	63.42	110.2
1-2	79.6%	15.27	0.496	0	0	0	2.817	10.69	23	35.16	48.17	70.31	105.5
3-5	71.4%	8.071	0.311	0	0	0	0	4.92	11.76	20.53	27.38	44.08	84.57
6-11	62.0%	3.493	0.163	0	0	0	0	1.901	5.102	9.341	12.81	22.22	38.47
12-19	43.1%	1.362	0.104	0	0	0	0	0	1.833	4.153	6.261	12.71	32.23
Other Vegetables													
Age (years)													
< 01	10.9%	0.466	0.293	0	0	0	0	0	0	0.565	2.853	11.07	14.76
1-2	62.4%	2.161	0.125	0	0	0	0	0.75	2.961	6.35	8.871	16.07	53.61
3-5	64.5%	1.726	0.091	0	0	0	0	0.706	2.239	4.693	7.206	13.35	21.71
6-11	66.3%	1.328	0.067	0	0	0	0	0.62	1.836	3.639	4.858	9.762	28.58
12-19	68.8%	0.804	0.042	0	0	0	0	0.33	1.127	2.086	2.961	6.27	12.56

Table 3-5. Per Capita Intake of Exposed/Protected Fruit and Vegetable Categories (g/kg-day as consumed)

Population Group	Percent Consuming	Mean	SE	P1	P5	P10	P25	P50	P75	P90	P95	P99	P100
Exposed Fruits													
Age (years)													
< 01	49.9%	10.02	0.995	0	0	0	0	4.449	16.53	30.09	38.78	58.46	69.61
01-02	68.6%	10.9	0.469	0	0	0	0	5.695	15.68	29.37	38.99	65.81	101.3
03-05	60.7%	5.637	0.277	0	0	0	0	2.717	8.096	15.84	22.18	34.98	77.08
06-11	49.3%	2.197	0.136	0	0	0	0	0	3.075	6.338	8.777	17.55	32.2
12-19	31.9%	0.872	0.087	0	0	0	0	0	1.07	2.857	4.85	8.787	14.91
Protected Fruits													
Age (years)													
< 01	27.0%	1.719	0.392	0	0	0	0	0	1.957	6.013	8.344	16.61	30.25
01-02	62.1%	6.449	0.309	0	0	0	0	3.59	9.186	17.84	24.18	39.03	113.4
03-05	54.5%	4.356	0.223	0	0	0	0	2.062	6.721	12.14	17.16	27.9	66.54
06-11	49.0%	2.702	0.165	0	0	0	0	0.165	3.817	8.074	11.44	19.81	31.71
12-19	46.4%	1.809	0.124	0	0	0	0	0	2.612	5.417	8.402	15.43	27.02
Exposed Vegetables													
Age (years)													
< 01	18.1%	1.189	0.371	0	0	0	0	0	0	4.991	7.353	14.65	19.04
1-2	63.4%	1.996	0.114	0	0	0	0	0.591	2.678	5.753	8.551	14.87	45.03
3-5	68.2%	1.63	0.083	0	0	0	0	0.674	2.241	4.442	6.378	12.79	25.07
6-11	70.6%	1.235	0.058	0	0	0	0	0.601	1.58	3.417	4.836	8.102	19.6
12-19	76.4%	0.966	0.041	0	0	0	0.055	0.53	1.338	2.53	3.61	5.767	13.02
Protected Vegetables													
Age (years)													
< 01	18.9%	1.281	0.371	0	0	0	0	0	0	5.42	7.785	11.9	23.1
01-02	41.4%	1.469	0.125	0	0	0	0	0	1.863	4.422	7.042	14.16	27.81
03-05	38.8%	1.079	0.09	0	0	0	0	0	1.402	3.52	5.417	10.3	17.99
06-11	38.7%	0.778	0.065	0	0	0	0	0	1.042	2.583	3.894	7.496	26.51
12-19	31.2%	0.462	0.055	0	0	0	0	0	0.437	1.517	2.348	5.766	21.55
Root Vegetables													
Age (years)													
< 01	30.4%	1.812	0.355	0	0	0	0	0	2.307	6.944	9.582	15.59	32.92
01-02	68.2%	2.572	0.134	0	0	0	0	1.447	3.562	6.774	8.331	16.78	83.29
03-05	71.1%	2.191	0.091	0	0	0	0	1.355	3.215	5.512	7.125	14.06	32.05
06-11	73.7%	1.62	0.063	0	0	0	0	1.034	2.315	4.171	5.325	9.492	20.59
12-19	76.2%	1.263	0.053	0	0	0	0.094	0.823	1.747	3.015	3.992	7.661	22.47

NOTE: SE = Standard error
P = Percentile of the distribution
Source: Based on EPA's analyses of the 1989-91 CSFII

Table 3-6. Per Capita Distribution of Fish (Finfish and Shellfish) Intake by Age and Gender - As Consumed

Age (years)	Sample Size	Mean (g/day)	90th % (g/day)	95th % (g/day)	99th % (g/day)	Mean (mg/kg-day)	90th % (mg/kg-day)	95th % (mg/kg-day)	99th % (mg/kg-day)
Freshwater and Estuarine									
Females									
14 or under	1431	1.58	1.44	12.51	36.09	67.12	57.30	460.16	1356.54
15 - 44	2891	4.28	10.90	28.80	70.87	66.22	174.96	451.04	1188.16
Males									
14 or under	1546	2.17	0.99	14.94	48.72	73.93	28.10	723.93	1290.10
15 - 44	2151	6.14	18.19	48.61	96.32	75.35	230.13	577.84	1132.23
Both Sexes									
14 or under	2977	1.88	1.31	13.90	40.77	70.59	53.24	556.34	1347.67
15 - 44	5042	5.17	13.88	36.21	86.14	70.58	197.11	502.26	1167.57
Marine									
Females									
14 or under	1431	6.60	24.84	37.32	87.05	256.90	936.94	1545.15	3060.22
15 - 44	2891	9.97	36.83	55.53	105.32	159.79	573.49	873.73	1700.21
Males									
14 or under	1546	7.25	24.85	49.89	92.64	230.25	846.57	1504.37	2885.08
15 - 44	2151	13.33	52.73	71.49	116.51	165.92	626.85	933.05	1472.98
Both Sexes									
14 or under	2977	6.93	24.88	42.07	91.64	243.31	873.87	1522.52	3059.93
15 - 44	5042	11.58	44.24	62.18	110.07	162.72	602.58	893.82	1576.09
All Fish									
Females									
14 or under	1431	8.19	32.28	43.09	95.19	324.02	1091.52	1690.99	3982.60
15 - 44	2891	14.25	47.13	71.58	120.84	226.01	755.51	1126.02	2195.86
Males									
14 or under	1546	9.42	34.85	52.85	98.36	304.17	1172.17	1575.43	3393.84
15 - 44	2151	19.46	68.60	93.65	149.07	241.27	867.70	1208.43	1760.48
Both Sexes									
14 or under	2977	8.82	32.88	50.95	98.33	313.90	1128.26	1679.91	3419.49
15 - 44	5042	16.74	57.88	84.59	138.21	233.30	828.12	1155.30	2003.46

Source: U.S. EPA, 1996.

Table 3-7. Consumers Only Distribution of Fish (Finfish and Shellfish) Intake by Age and Gender - As Consumed

Age (years)	Sample Size	Mean (g/day)	90th % (g/day)	95th % (g/day)	99th % (g/day)	Mean (mg/kg-day)	90th % (mg/kg-day)	95th % (mg/kg-day)	99th % (mg/kg-day)
Freshwater and Estuarine									
Females									
14 or under	138	38.44	91.30	128.97	182.66	1639.20	3915.56	6271.09	10113.24
15 - 44	445	61.40	148.83	185.44	363.56	961.58	2578.81	3403.75	6167.24
Males									
14 or under	157	52.44	112.05	154.44	230.74	1798.24	3759.29	3952.99	7907.38
15 - 44	356	81.56	224.01	275	371	1004.96	2744.61	3348.86	4569.62
Both Sexes									
14 or under	295	45.73	108.36	136.24	214.62	1721.99	3760.67	4208.18	9789.49
15 - 44	801	71.44	180.67	230.95	371.52	983.19	2616.63	3360.85	5089.78
Marine									
Females									
14 or under	315	69.04	114.23	162.37	336.59	2591.57	5074.80	6504.67	9970.44
15 - 44	774	76.53	149.78	178.74	271.06	1227.41	2469.67	3007.98	4800.68
Males									
14 or under	348	78.44	160.97	190.68	336.98	2471.15	4852.33	5860.72	8495.57
15 - 44	565	104.57	191.29	227.56	316.69	1302.62	2390.20	2882.91	3887.23
Both Sexes									
14 or under	663	73.62	153.2	176.9	337.24	2532.95	5068.69	6376.47	8749.02
15 - 44	1339	89.93	171.88	209.17	308.06	1263.35	2464.80	2961.92	4251.47
All Fish									
Females									
14 or under	378	69.54	126.22	165.27	338.04	2683.51	5299.68	7160.73	12473.65
15 - 44	952	88.8	170.01	212.56	361.04	1414.54	2726.46	3740.83	6703.25
Males									
14 or under	429	79.72	161.62	190	308.59	2568.93	4714.97	5818.08	9350.89
15 - 44	702	124.78	230.77	296.66	397.7	1545.93	2854.49	3773.51	5254.04
Both Sexes									
14 or under	807	74.8	153.7	178.08	337.46	2624.35	5020.14	6904.83	10384.82
15 - 44	1654	106.06	203.33	271.66	372.77	1477.57	2798.37	3747.88	5386.43

Source: U.S. EPA, 1996.

Table 3-8. Per Capita Distribution of Fish (Finfish and Shellfish) Intake by Age and Gender - Uncooked Fish Weight

Age (years)	Sample Size	Mean (g/day)	90th % (g/day)	95th % (g/day)	99th % (g/day)	Mean (mg/kg-day)	90th % (mg/kg-day)	95th % (mg/kg-day)	99th % (mg/kg-day)
Freshwater and Estuarine									
Females									
14 or under	1431	1.99	1.81	15.88	46.82	84.78	70.75	599.06	1713.06
15 - 44	2891	5.50	13.62	36.68	94.93	85.15	202.83	584.79	1411.42
Males									
14 or under	1546	2.69	1.07	18.47	57.07	91.62	38.98	868.97	1642.60
15 - 44	2151	7.87	22.10	63.26	126.61	96.91	281.17	740.91	1589.97
Both Sexes									
14 or under	2977	2.35	1.72	17.46	50.14	88.26	66.00	717.37	1688.55
15 - 44	5042	6.64	18.30	47.31	109.66	90.77	250.26	631.31	1529.94
Marine									
Females									
14 or under	1431	8.61	31.23	49.75)	104.26)	333.99	1132.99	1959.91	3776.60
15 - 44	2891	12.84	46.66	72.16)	133.69	206.03	762.54	1137.58	2174.21
Males									
14 or under	1546	9.40	31.32	65.37	118.42	296.99	1089.46	1907.65	3723.81
15 - 44	2151	17.11	66.06	93.32	155.16	212.88	800.79	1191.75	1890.42
Both Sexes									
14 or under	2977	9.02	31.52	56.35	117.75	315.12	1123.28	1909.37	3820.21
15 - 44	5042	14.88	55.99	80.70	138.23	209.30	780.16	1174.69	2019.59
All Fish									
Females									
14 or under	1431	10.60	41.10	56.16	130.78	418.76	1389.10	2341.90	4985.96
15 - 44	2891	18.35	62.21	93.13	155.75	291.18	993.92	1436.00	2726.50
Males									
14 or under	1546	12.09	45.59	68.18	127.20	388.61	1476.31	2038.58	4294.12
15 - 44	2151	24.98	87.15	122.29	197.15	309.78	1096.57	1566.39	2275.15
Both Sexes									
14 or under	2977	11.36	43.00	65.34	130.41	403.38	1442.72	2191.90	4425.27
15 - 44	5042	21.51	75.15	109.57	175.73	300.06	1040.98	1514.82	2481.23

Source: U.S. EPA, 1996.

Table 3-9. Per Capita Distribution of Fish (Finfish and Shellfish) Intake by Age and Gender - Uncooked Fish Weight

Age (years)	Sample Size	Mean (g/day)	90th % (g/day)	95th % (g/day)	99th % (g/day)	Mean (mg/kg-day)	90th % (mg/kg-day)	95th % (mg/kg-day)	99th % (mg/kg-day)
Freshwater and Estuarine									
Females									
14 or under	138	48.3	117.27	161.44	230.63	2070.41	4450.54	6915.31	13269.61
15 - 44	445	78.56	191.95	242.76	472.21	1229.97	3045.41	4191.25	7711.43
Males									
14 or under	157	64.91	141.35	193.79	287.28	2229.31	4638.34	5071.41	9622.15
15 - 44	356	104.86	269.96	343.66	494.38	1294.27	3318.89	4275.83	5974.96
Both Sexes									
14 or under	295	56.95	134.89	166.32	262.87	2153.11	4634.82	5756.93	12388.27
15 - 44	801	91.66	237.27	322.06	494.64	1261.99	3276.06	4246.63	6625.15
Marine									
Females									
14 or under	315	89.92	169.23	198.62	432.51	3359.10	6058.97	8573.62	13050.09
15 - 44	774	98.53	194.59	231.22	317.42	1582.77	3129.41	3854.14	5961.80
Males									
14 or under	348	101.5	205.49	242.28	408.68	3180.45	6434.20	8089.26	10764.01
15 - 44	565	133.86	244.46	297.67	393.14	1666.42	3102.24	3651.10	4998.14
Both Sexes									
14 or under	663	95.56	189.32	231.72	442.87	3272.13	6278.74	8424.77	11838.54
15 - 44	1339	115.41	223.99	263.76	383.16	1622.75	3120.60	3682.17	5517.95
All Fish									
Females									
14 or under	378	89.73	163.47	204.14	476.56	3448.73	7100.43	9012.18	15381.13
15 - 44	952	114.04	220.63	277.69	461.54	1818.32	3506.20	4661.96	8789.33
Males									
14 or under	429	102.01	205.25	244.46	386.47	3273.63	5734.46	7570.83	11891.85
15 - 44	702	160.06	305.61	379.38	495.51	1983.16	3720.05	4769.44	6121.56
Both Sexes									
14 or under	807	96.07	195.35	232.85	466.09	3358.33	6333.46	8611.73	12406.35
15 - 44	1654	136.12	262.15	343.86	488.9	1897.40	3674.88	4709.78	7276.18

Source: U.S. EPA, 1996.

Table 3-10. Mean and 95th Percentile of Fish Consumption (g/day) by Sex and Age[a]

		Total Fish	
	Age (years)	Mean	95th Percentile
Female	0 - 9	6.1	17.3
	10 - 19	9.0	25.0
Male	0 - 9	6.3	15.8
	10 - 19	11.2	29.1
Male & Female	0-9	6.2	16.5
	10-19	10.1	26.8

[a] The calculations in this table are based upon respondents who consumed fish in the month of the survey. These respondents are estimated to represent 94.0% of the U.S. population.

Source: Javitz, 1980.

Table 3-11. Best Fits of Lognormal Distributions Using the Nonlinear Optimization (Nlo) Method

	Teenagers	Children
Shellfish		
μ	-0.183	0.854
σ	1.092	0.730
(min SS)	1.19	16.06
Finfish (freshwater)		
μ	0.578	-0.559
σ	0.822	1.141
(min SS)	23.51	2.19
Finfish (saltwater)		
μ	1.691	0.881
σ	0.830	0.970
(min SS)	0.33	4.31

The following equations may be used with the appropriate μ and σ values to obtain an average Daily Consumption Rate (DCR), in grams, and percentiles of the DCR distribution.

$DCR50 = \exp(\mu)$
$DCR90 = \exp[\mu + z(0.90) \cdot \sigma]$
$DCR99 = \exp[\mu + z(0.99) \cdot \sigma]$
$DCR_{avg} = \exp[\mu + 0.5 \cdot \sigma^2]$

Source: Ruffle et al., 1994.

Table 3-12. Number of Respondents Reporting Consumption of a Specified Number of Servings of Seafood in 1 Month and Source of Seafood Eaten

Population Group	Total N	Number of Servings in a Month								
		1-2	3-5	6-10	11-19	20+	DK	Mostly Purchased	Mostly Caught	DK
Age (years)										
1-4	102	55	29	12	2	*	4	94	8	*
5-11	166	72	57	21	6	4	6	153	9	4
12-17	137	68	54	9	2	1	3	129	6	2

Note: * = Missing data; DK = Don't know; % = Row percentage; N = Sample size; Refused = Respondent refused to answer.
Source: Tsang and Klepeis, 1996.

Table 3-13. Mean Fish Intake Among Individuals Who Eat Fish and Reside in Households With Recreational Fish Consumption

Group	All Fish meals/week	Recreational Fish meals/week	n	Total Fish grams/day	Recreational Fish grams/day	Total Fish grams/ kg/day	Recreational Fish grams/ kg/day
Age Groups (years)							
1-5	0.463	0.223	121	11.4	5.63	0.737	0.369
6 to 10	0.49	0.278	151	13.6	7.94	0.481	0.276
1 to 20	0.407	0.229	349	12.3	7.27	0.219	0.123

Source: U.S. EPA analysis using data from West et al., 1989.

Table 3-14. Children's 5 and Under Fish Consumption Rates - Throughout Year

Number of Grams/Day	Unweighted Cumulative Percent
0.0	21.1%
0.4	21.6%
0.8	22.2%
1.6	24.7%
2.4	25.3%
3.2	28.4%
4.1	32.0%
4.9	33.5%
6.5	35.6%
8.1	47.4%
9.7	48.5%
12.2	51.0%
13.0	51.5%
16.2	72.7%
19.4	73.2%
20.3	74.2%
24.3	76.3%
32.4	87.1%
48.6	91.2%
64.8	94.3%
72.9	96.4%
81.0	97.4%
97.2	98.5%
162.0	100%

N = 194
Unweighted Mean = 19.6 grams/day
Unweighted SE = 1.94
Source: CRITFC, 1994.

Table 3-15. Fat Intake Among Children Based on Data from the Bogalusa Heart Study, 1973-1982 (g/day)

Age (years)	N	Mean	St. Dev.	P10	P25	P50	P75	P90	Minimum	Maximum
Total Fat Intake										
6 Mo.	125	37.1	17.5	18.7	25.6	33.9	46.3	60.8	3.4	107.6
1	99	59.1	26.0	29.1	40.4	56.1	71.4	94.4	21.6	152.7
2	135	86.7	41.3	39.9	55.5	79.2	110.5	141.1	26.5	236.4
3	106	91.6	38.8	50.2	63.6	82.6	114.6	153.0	32.6	232.5
4	219	98.6	56.1	46.0	66.8	87.0	114.6	163.3	29.3	584.6
10	871	93.2	50.8	45.7	60.5	81.4	111.3	154.5	14.6	529.5
13	148	107.0	53.9	53.0	69.8	90.8	130.7	184.1	9.8	282.2
15	108	97.7	48.7	46.1	65.2	85.8	124.0	165.2	10.0	251.3
17	159	107.8	64.3	41.4	59.7	97.3	140.2	195.1	8.5	327.4
Total Animal Fat										
6 Mo.	125	18.4	16.0	0.7	4.2	13.9	28.4	42.5	0.0	61.1
1	99	36.5	20.0	15.2	23.1	33.0	45.9	65.3	0.0	127.1
2	135	49.5	28.3	20.1	28.9	42.1	66.0	81.4	10.0	153.4
3	106	50.1	29.4	21.3	29.1	42.9	64.4	88.9	14.1	182.6
4	219	50.8	31.7	21.4	28.1	42.6	66.4	92.6	5.9	242.2
10	871	54.1	39.6	20.3	30.6	45.0	64.6	97.5	0.0	412.3
13	148	56.2	39.8	19.8	28.5	44.8	72.8	109.4	4.7	209.6
15	108	53.8	35.1	15.9	28.3	44.7	67.9	105.8	0.6	182.1
17	159	64.4	48.5	15.2	30.7	51.6	86.6	128.8	2.6	230.3
Total Vegetable Fat Intake										
6 Mo.	125	9.2	12.8	0.6	1.2	2.8	11.6	29.4	0.0	53.2
1	99	15.4	14.3	3.7	6.1	11.3	18.1	38.0	0.2	70.2
2	135	19.3	16.3	3.8	7.9	14.8	26.6	42.9	0.7	96.6
3	106	21.1	15.5	3.9	8.6	18.7	26.6	45.2	1.0	70.4
4	219	24.5	18.6	5.7	10.4	21.8	33.3	48.5	0.9	109.0
10	871	23.7	21.6	4.3	9.5	18.3	30.6	49.0	0.6	203.7
13	148	34.3	27.4	8.4	17.9	31.2	44.6	57.5	0.0	238.3
15	108	27.3	22.8	5.1	11.9	22.6	38.1	54.4	0.7	132.2
17	159	25.7	21.3	4.2	11.7	20.8	32.9	47.6	0.0	141.5
Total Fish Fat Intake										
6 Mo.	125	0.046	0.130	0.000	0.000	0.000	0.000	0.140	0.000	0.900
1	99	0.047	0.233	0.000	0.000	0.000	0.000	0.000	0.000	1.900
2	135	0.036	0.229	0.000	0.000	0.000	0.000	0.000	0.000	1.900
3	106	0.100	0.591	0.000	0.000	0.000	0.000	0.000	0.000	4.500
4	219	2.255	31.05	0.000	0.000	0.000	0.000	0.000	0.000	459.2
10	871	0.292	1.452	0.000	0.000	0.000	0.000	0.000	0.000	19.2
13	148	0.269	2.151	0.000	0.000	0.000	0.000	0.000	0.000	25.4
15	108	0.431	1.467	0.000	0.000	0.000	0.000	0.000	0.000	9.500
17	159	0.465	2.010	0.000	0.000	0.000	0.000	0.000	0.000	15.3

Source: Frank et al., 1986.

Table 3-16. Fat Intake Among Children Based on Data from the Bogalusa Heart Study, 1973-1982 (g/kg/day)

Age (years)	N	Mean	St. Dev.	P10	P25	P50	P75	P90	Minimum	Maximum
Total Fat Intake										
6 Mo.	125	4.94	2.32	2.41	3.28	4.67	6.19	7.97	0.39	13.16
1	99	6.12	2.75	3.03	4.11	5.66	7.47	9.53	2.27	16.38
2	132	6.98	3.34	3.37	4.45	6.15	8.56	11.94	2.14	18.69
3	106	6.40	2.67	3.61	4.56	5.50	8.16	9.93	2.18	16.73
4	218	6.05	3.66	2.88	3.96	5.24	6.97	9.98	2.03	38.21
10	861	2.70	1.52	1.23	1.68	2.35	3.32	4.54	0.33	13.86
13	147	2.28	1.30	1.03	1.47	1.99	2.80	3.81	0.21	10.19
15	105	1.73	0.84	0.84	1.18	1.54	2.14	3.13	0.15	4.73
17	149	1.77	1.02	0.69	0.92	1.62	2.24	3.10	0.16	6.23
Total Animal Fat										
6 Mo.	125	2.43	2.13	0.08	0.60	2.03	3.74	5.47	0.00	8.99
1	99	3.78	2.12	1.70	2.37	3.39	4.90	6.48	0.00	13.64
2	132	3.99	2.31	1.73	2.29	3.36	5.22	6.69	0.67	13.40
3	106	3.50	2.01	1.56	2.07	3.13	4.18	6.05	0.90	13.14
4	218	3.12	2.05	1.26	1.73	2.64	4.04	5.38	0.39	15.43
10	861	1.56	1.16	0.55	0.84	1.28	1.92	2.83	0.00	10.79
13	147	1.19	0.86	0.40	0.59	0.94	1.59	2.28	0.08	5.19
15	105	0.95	0.62	0.32	0.54	0.81	1.25	1.90	0.01	3.07
17	149	1.04	0.77	0.26	0.51	0.83	1.38	1.97	0.05	4.15
Total Vegetable Fat Intake										
6 Mo.	125	1.237	1.794	0.079	0.160	0.354	1.558	4.076	0.000	8.199
1	99	1.594	1.550	0.401	0.630	1.169	1.868	3.784	0.022	7.610
2	132	1.561	1.381	0.299	0.647	1.134	2.037	3.504	0.057	8.474
3	106	1.474	1.066	0.277	0.603	1.359	1.963	2.958	0.077	5.047
4	218	1.492	1.153	0.356	0.617	1.208	2.059	2.827	0.061	7.315
10	861	0.685	0.638	0.127	0.257	0.516	0.863	1.440	0.019	4.244
13	147	0.748	0.790	0.161	0.381	0.606	0.931	1.248	0.000	8.603
15	105	0.490	0.397	0.086	0.225	0.436	0.653	0.904	0.010	2.226
17	149	0.439	0.359	0.071	0.175	0.353	0.597	0.908	0.000	2.128
Total Fish Fat Intake										
6 Mo.	125	0.006	0.018	0.000	0.000	0.000	0.000	0.021	0.000	0.127
1	99	0.005	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.219
2	132	0.003	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.160
3	106	0.007	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.341
4	218	0.148	2.034	0.000	0.000	0.000	0.000	0.000	0.000	30.03
10	861	0.009	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.625
13	147	0.005	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.405
15	105	0.008	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.189
17	149	0.008	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.234

Source: Frank et al., 1986.

Table 3-17. Mean Total Daily Dietary Fat Intake (g/day) Grouped by Age and Gender[a]

	Total		Males		Females	
Age (yrs)	N	Mean Fat Intake (g/day)	N	Mean Fat Intake (g/day)	N	Mean Fat Intake (g/day)
2-11 (months)	871	37.52	439	38.31	432	36.95
1-2	1,231	49.96	601	51.74	630	48.33
3-5	1,647	60.39	744	70.27	803	61.51
6-11	1,745	74.17	868	79.45	877	68.95
12-16	711	85.19	338	101.94	373	71.23
16-19	785	100.50	308	123.23	397	77.46

[a] Total dietary fat intake includes all fat (i.e., saturated and unsaturated) derived from consumption of foods and beverages (excluding plain drinking water).

Source: Adapted from CDC, 1994.

Table 3-18. Per Capita Total Dietary Intake

Population Group	Percent Consuming	Mean	Adjusted SE	P1	P5	P10	P25	P50	P75	P90	P95	P99	P100
						(g/day, as consumed)							
Age (years)													
Age < 01	92.2%	1.0E+03	2.6E+01	8.0E+00	1.3E+02	3.5E+02	8.4E+02	1.1E+03	1.3E+03	1.6E+03	1.8E+03	2.3E+03	2.5E+03
Age 01-02	100.0%	1.1E+03	1.1E+01	3.2E+02	5.1E+02	6.2E+02	8.1E+02	1.1E+03	1.3E+03	1.6E+03	1.8E+03	2.2E+03	2.8E+03
Age 03-05	100.0%	1.0E+03	9.9E+00	3.4E+02	5.0E+02	5.8E+02	7.6E+02	1.0E+03	1.2E+03	1.5E+03	1.7E+03	2.1E+03	2.6E+03
Age 06-11	100.0%	1.1E+03	1.1E+01	4.0E+02	5.7E+02	6.7E+02	8.3E+02	1.1E+03	1.3E+03	1.7E+03	1.9E+03	2.3E+03	3.6E+03
Age 12-19	100.0%	1.2E+03	1.7E+01	2.9E+02	4.2E+02	5.6E+02	7.8E+02	1.1E+03	1.5E+03	1.9E+03	2.3E+03	3.2E+03	9.0E+03
						(g/kg/day, as consumed)							
Age (years)													
Age < 01	88.0%	1.4e+02	4.6e+00	0	6.9e+00	2.4e+01	1.0e+02	1.4e+02	1.8e+02	2.2e+02	2.4e+02	3.2e+02	5.8e+02
Age 01-02	96.0%	8.4e+01	1.1e+00	0	2.6e+01	3.9e+01	6.0e+01	8.1e+01	1.0e+02	1.3e+02	1.5e+02	1.9e+02	2.6e+02
Age 03-05	93.2%	5.5e+01	7.3e-01	0	0.0e+00	2.6e+01	3.8e+01	5.4e+01	7.0e+01	8.9e+01	1.0e+02	1.3e+02	1.9e+02
Age 06-11	93.4%	3.6e+01	5.1e-01	0	0.0e+00	1.5e+01	2.4e+01	3.4e+01	4.6e+01	6.0e+01	6.9e+01	8.9e+01	1.2e+02
Age 12-19	98.2%	2.0e+01	3.1e-01	0	6.2e+00	8.1e+00	1.2e+01	1.8e+01	2.6e+01	3.5e+01	4.0e+01	5.8e+01	1.2e+02

Note: SE = Standard error.
P = percentile of the distribution.
Source: Based on EPA's analysis of the 1994-96 CSFII.

Table 3-19. Per Capita Intake of Major Food Groups (g/day, as consumed)

Food Group	Percent Consuming	MEAN	Adjusted SE	P1	P5	P10	P25	P50	P75	P90	P95	P99	P100
Age <1 Year													
Total Dietary Intake	92.2%	1.0E+03	2.6E+01	8.0E+00	1.3E+02	3.5E+02	8.4E+02	1.1E+03	1.3E+03	1.6E+03	1.8E+03	2.3E+03	2.5E+03
Total Dairy Intake	87.7%	7.9E+02	2.4E+01	0.0E+00	3.1E+00	1.3E+02	6.1E+02	8.1E+02	9.9E+02	1.3E+03	1.5E+03	2.0E+03	2.1E+03
Total Meat Intake	33.4%	1.1E+01	1.9E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.3E+01	3.5E+01	5.7E+01	8.9E+01	1.2E+02
Total Egg Intake	30.1%	3.9E+00	1.3E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	6.3E-01	2.7E+00	3.8E+01	7.5E+01	8.9E+01
Total Fish Intake	20.9%	9.6E-01	4.2E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.5E+00	5.0E+00	1.3E+01	4.3E+01
Total Grain Intake	67.4%	3.7E+01	3.6E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.4E+01	4.7E+01	1.2E+02	1.8E+02	2.4E+02	3.6E+02
Total Vegetable Intake	52.4%	6.0E+01	5.7E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.8E+01	1.1E+02	1.6E+02	1.9E+02	3.0E+02	7.0E+02
Total Fruit Intake	58.8%	1.1E+02	9.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	6.4E+01	1.9E+02	2.9E+02	3.5E+02	5.6E+02	7.5E+02
Total Fat Intake[a]	30.1%	7.5E-01	1.5E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.3E+00	2.5E+00	3.3E+00	7.5E+00	1.1E+01
Ages 1-2 Years													
Total Dietary Intake	100.0%	1.1E+03	1.1E+01	3.2E+02	5.1E+02	6.2E+02	8.1E+02	1.1E+03	1.3E+03	1.6E+03	1.8E+03	2.2E+03	2.8E+03
Total Dairy Intake	99.7%	4.8E+02	8.3E+00	5.3E+00	7.0E+01	1.3E+02	2.6E+02	4.3E+02	6.5E+02	8.9E+02	1.1E+03	1.4E+03	2.0E+03
Total Meat Intake	97.8%	5.9E+01	1.2E+00	0.0E+00	6.2E+00	1.2E+01	2.7E+01	5.2E+01	8.2E+01	1.2E+02	1.4E+02	1.9E+02	3.2E+02
Total Egg Intake	92.5%	1.6E+01	7.1E-01	0.0E+00	0.0E+00	1.7E-01	8.1E-01	2.3E+00	2.4E+01	4.9E+01	7.0E+01	1.1E+02	1.9E+02
Total Fish Intake	60.7%	4.9E+00	4.7E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.2E+00	3.9E+00	1.1E+01	2.4E+01	6.9E+01	1.7E+02
Total Grain Intake	99.6%	1.5E+02	2.4E+00	1.6E+01	3.9E+01	5.4E+01	8.7E+01	1.3E+02	1.9E+02	2.6E+02	3.2E+02	4.5E+02	6.5E+02
Total Vegetable Intake	99.3%	1.3E+02	2.5E+00	3.9E+00	1.9E+01	3.4E+01	6.6E+01	1.1E+02	1.6E+02	2.4E+02	3.1E+02	4.4E+02	7.1E+02
Total Fruit Intake	89.0%	2.5E+02	6.4E+00	0.0E+00	0.0E+00	0.0E+00	9.3E+01	2.0E+02	3.6E+02	5.4E+02	7.1E+02	9.2E+02	2.1E+03
Total Fat Intake[a]	93.9%	5.5E+00	1.5E-01	0.0E+00	0.0E+00	6.7E-01	1.9E+00	4.1E+00	7.2E+00	1.2E+01	1.6E+01	2.6E+01	5.0E+01
Ages 3-5 Years													
Total Dietary Intake	100.0%	1.0E+03	9.9E+00	3.4E+02	5.0E+02	5.8E+02	7.6E+02	1.0E+03	1.2E+03	1.5E+03	1.7E+03	2.1E+03	2.6E+03
Total Dairy Intake	99.6%	3.9E+02	6.3E+00	7.8E+00	7.4E+01	1.2E+02	2.2E+02	3.6E+02	5.1E+02	7.2E+02	8.3E+02	1.2E+03	1.7E+03
Total Meat Intake	99.0%	7.9E+01	1.3E+00	0.0E+00	1.6E+01	2.4E+01	4.4E+01	7.2E+01	1.0E+02	1.4E+02	1.7E+02	2.4E+02	3.8E+02
Total Egg Intake	90.8%	1.3E+01	7.0E-01	0.0E+00	0.0E+00	8.3E-02	7.3E-01	1.8E+00	2.0E+01	4.3E+01	6.3E+01	1.1E+02	2.5E+02
Total Fish Intake	61.0%	6.1E+00	5.4E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.7E+00	5.0E+00	1.4E+01	3.4E+01	8.0E+01	2.0E+02
Total Grain Intake	99.8%	1.9E+02	2.8E+00	4.7E+01	7.0E+01	8.8E+01	1.2E+02	1.7E+02	2.4E+02	3.1E+02	3.6E+02	5.3E+02	1.6E+03
Total Vegetable Intake	99.4%	1.4E+02	2.5E+00	3.4E+00	2.4E+01	4.0E+01	7.4E+01	1.2E+02	1.8E+02	2.6E+02	3.2E+02	4.8E+02	7.6E+02
Total Fruit Intake	84.4%	2.1E+02	5.5E+00	0.0E+00	0.0E+00	0.0E+00	6.2E+01	1.6E+02	3.1E+02	4.7E+02	5.6E+02	8.4E+02	1.9E+03
Total Fat Intake[a]	95.6%	7.8E+00	2.0E-01	0.0E+00	1.7E-01	1.0E+00	2.7E+00	5.6E+00	1.1E+01	1.8E+01	2.2E+01	3.7E+01	6.3E+01
Ages 6-11 Years													
Total Dietary Intake	100.0%	1.1E+03	1.1E+01	4.0E+02	5.7E+02	6.7E+02	8.3E+02	1.1E+03	1.3E+03	1.7E+03	1.9E+03	2.3E+03	3.6E+03
Total Dairy Intake	99.7%	4.3E+02	6.7E+00	1.4E+01	7.6E+01	1.3E+02	2.5E+02	3.9E+02	5.8E+02	7.7E+02	8.6E+02	1.2E+03	2.7E+03
Total Meat Intake	99.0%	9.4E+01	1.6E+00	2.5E+00	1.8E+01	2.8E+01	5.1E+01	8.5E+01	1.2E+02	1.7E+02	2.0E+02	3.0E+02	4.1E+02
Total Egg Intake	91.6%	1.3E+01	7.3E-01	0.0E+00	0.0E+00	2.1E-01	9.0E-01	2.2E+00	6.5E+00	4.6E+01	6.6E+01	1.3E+02	2.2E+02
Total Fish Intake	62.4%	8.9E+00	7.9E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.4E+00	6.1E+00	1.9E+01	4.4E+01	1.3E+02	2.1E+02
Total Grain Intake	99.9%	2.3E+02	2.9E+00	5.0E+01	8.5E+01	1.1E+02	1.5E+02	2.1E+02	2.8E+02	3.7E+02	4.3E+02	5.9E+02	7.8E+02
Total Vegetable Intake	99.7%	1.7E+02	3.1E+00	1.0E+01	3.6E+01	5.4E+01	9.1E+01	1.4E+02	2.2E+02	3.2E+02	3.9E+02	5.9E+02	1.2E+03
Total Fruit Intake	77.0%	1.7E+02	5.6E+00	0.0E+00	0.0E+00	0.0E+00	3.0E+01	1.2E+02	2.6E+02	4.3E+02	5.1E+02	8.7E+02	1.2E+03
Total Fat Intake[a]	96.9%	1.1E+01	2.8E-01	0.0E+00	7.8E-01	1.6E+00	3.7E+00	7.7E+00	1.4E+01	2.4E+01	3.0E+01	5.2E+01	8.2E+01
Ages 12-19 Years													
Total Dietary Intake	100.0%	1.2E+03	1.7E+01	2.9E+02	4.2E+02	5.6E+02	7.8E+02	1.1E+03	1.5E+03	1.9E+03	2.3E+03	3.2E+03	9.0E+03

Table 3-19. Per Capita Intake of Major Food Groups (g/day, as consumed) (continued)

Food Group	Percent Consuming	MEAN	Adjusted SE	P1	P5	P10	P25	P50	P75	P90	P95	P99	P100
Total Dairy Intake	98.7%	3.6E+02	8.8E+00	0.0E+00	1.4E+01	3.2E+01	1.1E+02	2.7E+02	5.1E+02	7.8E+02	1.0E+03	1.5E+03	2.0E+03
Total Meat Intake	99.1%	1.3E+02	2.9E+00	2.9E+00	2.0E+01	3.6E+01	7.0E+01	1.2E+02	1.7E+02	2.5E+02	3.0E+02	4.4E+02	2.1E+03
Total Egg Intake	92.7%	1.8E+01	9.5E-01	0.0E+00	0.0E+00	4.4E-01	1.5E+00	3.3E+00	1.1E+01	6.4E+01	8.8E+01	1.5E+02	3.1E+02
Total Fish Intake	64.4%	1.2E+01	1.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.7E+00	1.1E+01	2.5E+01	6.0E+01	1.5E+02	3.7E+02
Total Grain Intake	100.0%	2.6E+02	4.2E+00	3.9E+01	7.8E+01	1.1E+02	1.6E+02	2.3E+02	3.4E+02	4.4E+02	5.3E+02	8.4E+02	1.7E+03
Total Vegetable Intake	99.6%	2.4E+02	5.1E+00	1.8E+01	4.8E+01	7.3E+01	1.3E+02	2.1E+02	3.1E+02	4.4E+02	5.4E+02	8.1E+02	3.3E+03
Total Fruit Intake	61.9%	1.6E+02	7.6E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	8.4E+01	2.4E+02	4.3E+02	6.2E+02	9.3E+02	2.0E+03
Total Fat Intake[a]	96.7%	1.6E+01	4.6E-01	0.0E+00	9.7E-01	2.4E+00	5.3E+00	1.1E+01	2.0E+01	3.7E+01	4.9E+01	8.5E+01	1.3E+02

a Includes added fats such as butter, margarine, dressings and sauces, vegetable oil, etc.; does not include fats eaten as components of other foods such as meats.

Note: SE = Standard error.
P = percentile of the distribution.
Source: Based on EPA's analysis of the 1994-96 CSFII.

Table 3-20. Per Capita Intake of Major Food Groups (g/kg/day, as consumed)

Food Group	Percent Consuming	MEAN	Adjusted SE	P1	P5	P10	P25	P50	P75	P90	P95	P99	P100
Age <1 Year													
Total Dietary Intake	88.0%	1.4E+02	4.6E+00	0.0E+00	6.9E+00	2.4E+01	1.0E+02	1.4E+02	1.8E+02	2.2E+02	2.4E+02	3.2E+02	5.8E+02
Total Dairy Intake	83.6%	1.1E+02	4.9E+00	0.0E+00	0.0E+00	2.5E+00	6.4E+01	1.0E+02	1.6E+02	2.0E+02	2.4E+02	3.2E+02	5.8E+02
Total Meat Intake	32.3%	1.1E+00	2.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.4E+00	3.9E+00	5.9E+00	1.1E+01	1.2E+01
Total Egg Intake	29.0%	4.1E-01	1.4E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	7.0E-02	2.3E-01	3.3E+00	8.3E+00	1.1E+01
Total Fish Intake	20.9%	1.1E-01	4.7E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.3E-01	5.3E-01	1.6E+00	4.7E+00
Total Grain Intake	64.9%	4.1E+00	4.2E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.6E+00	5.4E+00	1.3E+01	2.0E+01	2.7E+01	4.0E+01
Total Vegetable Intake	50.1%	6.9E+00	7.2E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	2.3E+00	1.2E+01	1.8E+01	2.4E+01	3.6E+01	1.0E+02
Total Fruit Intake	56.8%	1.3E+01	1.1E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	7.6E+00	2.3E+01	3.6E+01	4.1E+01	6.4E+01	1.1E+02
Total Fat Intake[a]	29.2%	8.3E-02	1.7E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.4E-01	2.6E-01	4.0E-01	7.2E-01	1.7E+00
Ages 1-2 Years													
Total Dietary Intake	96.0%	8.4E+01	1.1E+00	0.0E+00	2.6E+01	3.9E+01	6.0E+01	8.1E+01	1.0E+02	1.3E+02	1.5E+02	1.9E+02	2.6E+02
Total Dairy Intake	95.7%	3.7E+01	7.8E-01	0.0E+00	4.1E-01	6.7E+00	1.8E+01	3.2E+01	5.1E+01	7.4E+01	9.0E+01	1.3E+02	1.8E+02
Total Meat Intake	94.0%	4.4E+00	9.4E-02	0.0E+00	0.0E+00	7.6E-01	1.9E+00	3.8E+00	6.2E+00	8.9E+00	1.0E+01	1.5E+01	2.4E+01
Total Egg Intake	88.8%	1.2E+00	5.5E-02	0.0E+00	0.0E+00	0.0E+00	5.3E-02	1.6E-01	1.8E+00	3.8E+00	5.1E+00	8.3E+00	1.4E+01
Total Fish Intake	58.2%	3.7E-01	3.7E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	8.0E-02	2.9E-01	7.8E-01	1.8E+00	4.7E+00	1.4E+01
Total Grain Intake	95.6%	1.1E+01	2.0E-01	0.0E+00	1.7E+00	3.6E+00	6.4E+00	9.8E+00	1.4E+01	2.1E+01	2.5E+01	3.5E+01	4.8E+01
Total Vegetable Intake	95.4%	9.5E+00	2.1E-01	0.0E+00	4.7E-01	1.9E+00	4.5E+00	8.0E+00	1.3E+01	1.9E+01	2.3E+01	3.3E+01	8.3E+01
Total Fruit Intake	85.5%	1.9E+01	5.2E-01	0.0E+00	0.0E+00	0.0E+00	6.4E+00	1.6E+01	2.7E+01	4.2E+01	5.4E+01	7.7E+01	1.3E+02
Total Fat Intakea	90.1%	4.2E-01	1.2E-02	0.0E+00	0.0E+00	1.0E-02	1.4E-01	3.1E-01	5.5E-01	9.1E-01	1.2E+00	2.2E+00	3.3E+00
Ages 3-5 Years													
Total Dietary Intake	93.2%	5.5E+01	7.3E-01	0.0E+00	0.0E+00	2.6E+01	3.8E+01	5.4E+01	7.0E+01	8.9E+01	1.0E+02	1.3E+02	1.9E+02
Total Dairy Intake	92.9%	2.1E+01	4.0E-01	0.0E+00	0.0E+00	3.5E+00	1.0E+01	1.9E+01	2.9E+01	4.1E+01	4.9E+01	6.6E+01	9.0E+01
Total Meat Intake	92.2%	4.1E+00	8.0E-02	0.0E+00	0.0E+00	7.7E-01	2.1E+00	3.8E+00	5.6E+00	7.8E+00	9.4E+00	1.3E+01	2.1E+01
Total Egg Intake	84.5%	6.5E-01	3.7E-02	0.0E+00	0.0E+00	0.0E+00	3.0E-02	8.8E-02	4.6E-01	2.1E+00	3.4E+00	6.1E+00	1.3E+01
Total Fish Intake	56.4%	3.2E-01	3.0E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	6.9E-02	2.5E-01	6.6E-01	1.7E+00	4.6E+00	9.6E+00
Total Grain Intake	93.1%	1.0E+01	2.0E-01	0.0E+00	0.0E+00	3.7E+00	6.3E+00	9.2E+00	1.3E+01	1.8E+01	2.1E+01	3.4E+01	1.2E+02
Total Vegetable Intake	92.7%	7.3E+00	1.6E-01	0.0E+00	0.0E+00	1.3E+00	3.4E+00	6.2E+00	9.7E+00	1.4E+01	1.8E+01	2.9E+01	4.6E+01
Total Fruit Intake	79.0%	1.1E+01	3.4E-01	0.0E+00	0.0E+00	0.0E+00	2.3E+00	8.1E+00	1.6E+01	2.6E+01	3.3E+01	5.3E+01	1.1E+02
Total Fat Intake[a]	89.2%	4.2E-01	1.2E-02	0.0E+00	0.0E+00	0.0E+00	1.3E-01	3.0E-01	5.9E-01	9.5E-01	1.3E+00	1.8E+00	3.1E+00
Ages 6-11 Years													
Total Dietary Intake	93.4%	3.6E+01	5.1E-01	0.0E+00	0.0E+00	1.5E+01	2.4E+01	3.4E+01	4.6E+01	6.0E+01	6.9E+01	8.9E+01	1.2E+02
Total Dairy Intake	93.3%	1.4E+01	2.8E-01	0.0E+00	0.0E+00	2.2E+00	6.4E+00	1.2E+01	1.9E+01	2.7E+01	3.3E+01	4.3E+01	8.1E+01
Total Meat Intake	92.4%	2.9E+00	6.0E-02	0.0E+00	0.0E+00	5.2E-01	1.4E+00	2.5E+00	4.0E+00	5.6E+00	6.8E+00	1.0E+01	1.8E+01
Total Egg Intake	85.3%	4.0E-01	2.5E-02	0.0E+00	0.0E+00	0.0E+00	2.2E-02	6.3E-02	1.8E-01	1.4E+00	2.2E+00	4.4E+00	9.3E+00
Total Fish Intake	57.5%	2.6E-01	2.5E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	5.8E-02	1.8E-01	4.8E-01	1.3E+00	4.2E+00	6.7E+00
Total Grain Intake	93.4%	7.2E+00	1.2E-01	0.0E+00	0.0E+00	2.5E+00	4.3E+00	6.7E+00	9.4E+00	1.3E+01	1.6E+01	2.0E+01	3.6E+01
Total Vegetable Intake	93.2%	5.3E+00	1.2E-01	0.0E+00	0.0E+00	1.1E+00	2.5E+00	4.3E+00	7.1E+00	1.0E+01	1.4E+01	2.1E+01	5.2E+01
Total Fruit Intake	71.2%	5.4E+00	2.0E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.4E+00	7.9E+00	1.4E+01	1.8E+01	2.8E+01	4.5E+01
Total Fat Intake[a]	90.5%	3.4E-01	1.0E-02	0.0E+00	0.0E+00	2.2E-02	9.8E-02	2.3E-01	4.5E-01	8.0E-01	1.1E+00	1.5E+00	3.1E+00
Ages 12-19 Years													
Total Dietary Intake	98.2%	2.0E+01	3.1E-01	0.0E+00	6.2E+00	8.1E+00	1.2E+01	1.8E+01	2.6E+01	3.5E+01	4.0E+01	5.8E+01	1.2E+02

Table 3-20. Per Capita Intake of Major Food Groups (g/kg/day, as consumed) (continued)

Food Group	Percent Consuming	MEAN	Adjusted SE	P1	P5	P10	P25	P50	P75	P90	P95	P99	P100
Total Dairy Intake	96.9%	6.1E+00	1.6E-01	0.0E+00	1.7E-01	4.1E-01	1.8E+00	4.5E+00	8.8E+00	1.3E+01	1.8E+01	2.8E+01	3.8E+01
Total Meat Intake	97.3%	2.2E+00	4.6E-02	0.0E+00	2.7E-01	5.3E-01	1.1E+00	1.9E+00	2.8E+00	3.9E+00	4.9E+00	7.5E+00	2.7E+01
Total Egg Intake	91.0%	2.9E-01	1.5E-02	0.0E+00	0.0E+00	6.0E-03	2.4E-02	5.5E-02	1.8E-01	1.0E+00	1.4E+00	2.5E+00	4.7E+00
Total Fish Intake	62.9%	2.0E-01	1.7E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	5.5E-02	1.7E-01	4.2E-01	1.1E+00	2.5E+00	5.4E+00
Total Grain Intake	98.2%	4.4E+00	8.0E-02	0.0E+00	1.1E+00	1.5E+00	2.5E+00	3.8E+00	5.5E+00	7.9E+00	9.7E+00	1.4E+01	3.5E+01
Total Vegetable Intake	97.9%	4.0E+00	8.5E-02	0.0E+00	6.3E-01	1.1E+00	2.1E+00	3.4E+00	5.1E+00	7.4E+00	9.3E+00	1.5E+01	4.2E+01
Total Fruit Intake	60.7%	2.8E+00	1.3E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.4E+00	4.1E+00	8.0E+00	1.1E+01	1.7E+01	3.2E+01
Total Fat Intake[a]	95.0%	2.7E-01	8.0E-03	0.0E+00	1.1E-02	3.6E-02	8.7E-02	1.8E-01	3.4E-01	6.2E-01	8.3E-01	1.4E+00	1.8E+00

a Includes added fats such as butter, margarine, dressings and sauces, vegetable oil, etc.; does not include fats eaten as components of other foods such as meats.

Note: SE = Standard error.
P = percentile of the distribution.
Source: Based on EPA's analysis of the 1994-96 CSFII.

Table 3-21. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Food Intake

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
	Age <1 Year (g/day, as consumed)						Age <1 Year (g/kg/day, as consumed)					
Total Foods	1.4E+00	100.0%	9.9E+02	100.0%	1.8E+03	100.0%	0.0E+00	0.0%	1.3E+02	100.0%	2.6E+02	100.0%
Total Dairy	9.4E-02	6.8%	8.4E+02	84.9%	1.4E+03	79.9%	0.0E+00	0.0%	9.6E+01	75.2%	2.4E+02	92.1%
Total Meats	0.0E+00	0.0%	4.9E+00	0.5%	7.7E+00	0.4%	0.0E+00	0.0%	1.8E+00	1.4%	1.8E-01	0.1%
Total Fish	0.0E+00	0.0%	4.6E-01	0.0%	6.0E-01	0.0%	0.0E+00	0.0%	1.2E-01	0.1%	2.3E-02	0.0%
Total Eggs	0.0E+00	0.0%	2.8E+00	0.3%	1.4E+00	0.1%	0.0E+00	0.0%	1.0E+00	0.8%	8.0E-03	0.0%
Total Grains	5.8E-01	41.7%	2.1E+01	2.1%	6.8E+01	3.8%	0.0E+00	0.0%	5.3E+00	4.1%	4.0E+00	1.5%
Total Vegetables	4.0E-01	28.7%	2.6E+01	2.6%	1.1E+02	6.1%	0.0E+00	0.0%	7.8E+00	6.1%	6.9E+00	2.6%
Total Fruits	3.2E-01	22.8%	9.5E+01	9.6%	1.7E+02	9.5%	0.0E+00	0.0%	1.6E+01	12.2%	9.6E+00	3.7%
Total Fats[a]	0.0E+00	0.0%	5.0E-01	0.1%	7.1E-01	0.0%	0.0E+00	0.0%	1.4E-01	0.1%	2.0E-02	0.0%
	Ages 1-2 Years (g/day, as consumed)						Ages 1-2 Years (g/kg/day, as consumed)					
Total Foods	4.8E+02	100.0%	1.1E+03	100.0%	1.9E+03	100.0%	1.9E+01	100%	8.1E+01	100.0%	1.6E+02	100.0%
Total Dairy	1.6E+02	33.3%	4.5E+02	42.5%	9.2E+02	49.1%	6.0E+00	31%	3.4E+01	42.5%	8.3E+01	52.3%
Total Meats	4.8E+01	10.0%	5.9E+01	5.6%	7.0E+01	3.7%	2.0E+00	11%	4.8E+00	5.9%	5.6E+00	3.5%
Total Fish	2.4E+00	0.5%	5.6E+00	0.5%	6.9E+00	0.4%	8.9E-02	0%	5.5E-01	0.7%	5.0E-01	0.3%
Total Eggs	1.2E+01	2.5%	1.5E+01	1.5%	2.3E+01	1.2%	6.7E-01	3%	1.4E+00	1.7%	1.6E+00	1.0%
Total Grains	1.0E+02	21.0%	1.5E+02	14.5%	1.8E+02	9.8%	4.2E+00	22%	1.1E+01	13.6%	1.5E+01	9.2%
Total Vegetables	7.4E+01	15.3%	1.2E+02	11.5%	1.9E+02	10.0%	3.2E+00	17%	1.0E+01	12.5%	1.5E+01	9.6%
Total Fruits	8.0E+01	16.7%	2.5E+02	23.3%	4.7E+02	25.3%	2.8E+00	14%	1.8E+01	22.6%	3.8E+01	23.7%
Total Fats[a]	3.7E+00	0.8%	5.7E+00	0.5%	7.5E+00	0.4%	1.6E-01	1%	4.4E-01	0.5%	5.7E-01	0.4%
	Ages 3-5 Years (g/day, as consumed)						Ages 3-5 Years (g/kg/day, as consumed)					
Total Foods	4.7E+02	100.0%	1.0E+03	100.0%	1.8E+03	100.0%	6.8E+00	100.0%	5.4E+01	100.0%	1.1E+02	100.0%
Total Dairy	1.5E+02	31.0%	4.0E+02	40.0%	7.2E+02	39.9%	1.8E+00	27.1%	2.2E+01	40.6%	4.1E+01	37.9%
Total Meats	6.1E+01	12.9%	7.8E+01	7.9%	1.0E+02	5.8%	9.5E-01	14.0%	4.5E+00	8.3%	6.3E+00	5.9%
Total Fish	4.1E+00	0.9%	6.5E+00	0.7%	1.0E+01	0.6%	4.1E-02	0.6%	3.1E-01	0.6%	4.6E-01	0.4%
Total Eggs	1.0E+01	2.1%	1.1E+01	1.1%	2.5E+01	1.4%	2.0E-01	2.9%	6.4E-01	1.2%	1.1E+00	1.0%
Total Grains	1.1E+02	24.0%	1.9E+02	18.6%	2.8E+02	15.5%	1.8E+00	27.0%	1.0E+01	18.6%	1.8E+01	16.9%
Total Vegetables	8.1E+01	17.0%	1.3E+02	13.2%	2.1E+02	11.9%	1.2E+00	17.2%	7.1E+00	13.1%	1.3E+01	12.0%
Total Fruits	5.3E+01	11.1%	1.8E+02	17.9%	4.4E+02	24.4%	6.9E-01	10.1%	9.1E+00	16.9%	2.7E+01	25.2%
Total Fats[a]	4.7E+00	1.0%	7.0E+00	0.7%	1.2E+01	0.7%	8.3E-02	1.2%	4.5E-01	0.8%	6.5E-01	0.6%
	Ages 6-11 Years (g/day, as consumed)						Ages 6-11 Years (g/kg/day, as consumed)					
Total Foods	5.4E+02	100.0%	1.1E+03	100.0%	1.9E+03	100.0%	3.8E+00	100.0%	3.3E+01	100.0%	7.2E+01	100.0%
Total Dairy	1.6E+02	30.1%	3.9E+02	36.5%	7.8E+02	39.9%	9.9E-01	26.2%	1.3E+01	39.7%	3.0E+01	41.4%
Total Meats	7.7E+01	14.3%	1.0E+02	9.5%	1.2E+02	6.1%	5.8E-01	15.3%	3.1E+00	9.2%	4.7E+00	6.6%
Total Fish	8.2E+00	1.5%	7.5E+00	0.7%	1.2E+01	0.6%	5.3E-02	1.4%	2.6E-01	0.8%	3.6E-01	0.5%
Total Eggs	7.6E+00	1.4%	1.1E+01	1.0%	2.0E+01	1.0%	9.2E-02	2.4%	4.5E-01	1.3%	7.7E-01	1.1%
Total Grains	1.4E+02	26.2%	2.2E+02	20.3%	3.4E+02	17.5%	1.1E+00	30.0%	7.0E+00	21.0%	1.3E+01	17.9%
Total Vegetables	9.3E+01	17.4%	1.7E+02	16.5%	2.8E+02	14.4%	7.5E-01	19.7%	4.7E+00	13.9%	9.9E+00	13.8%
Total Fruits	4.3E+01	8.1%	1.5E+02	14.5%	3.8E+02	19.7%	1.3E-01	3.4%	4.4E+00	13.1%	1.3E+01	17.9%
Total Fats[a]	5.7E+00	1.1%	9.9E+00	0.9%	1.5E+01	0.8%	6.0E-02	1.6%	3.2E-01	1.0%	5.6E-01	0.8%
	Ages 12-19 Years (g/day, as consumed)						Ages 12-19 Years (g/kg/day, as consumed)					

Table 3-21. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Food Intake (continued)

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
Total Foods	4.1E+02	100.0%	1.1E+03	100.0%	2.4E+03	100.0%	5.1E+00	100.0%	1.8E+01	100.0%	4.4E+01	100.0%
Total Dairy	6.2E+01	15.1%	2.9E+02	26.8%	8.5E+02	35.1%	8.7E-01	17.1%	4.7E+00	26.7%	1.6E+01	36.1%
Total Meats	7.7E+01	18.6%	1.2E+02	11.6%	2.2E+02	8.9%	8.6E-01	17.0%	2.1E+00	12.1%	3.5E+00	7.9%
Total Fish	6.9E+00	1.7%	8.7E+00	0.8%	2.2E+01	0.9%	8.4E-02	1.7%	1.5E-01	0.9%	3.6E-01	0.8%
Total Eggs	7.3E+00	1.8%	1.7E+01	1.6%	2.7E+01	1.1%	9.9E-02	1.9%	3.0E-01	1.7%	4.0E-01	0.9%
Total Grains	1.1E+02	27.6%	2.4E+02	22.6%	4.3E+02	17.9%	1.5E+00	29.3%	4.0E+00	22.5%	8.6E+00	19.5%
Total Vegetables	1.1E+02	26.6%	2.3E+02	21.9%	4.4E+02	18.0%	1.3E+00	26.5%	3.6E+00	20.6%	7.3E+00	16.6%
Total Fruits	2.8E+01	6.8%	1.4E+02	13.5%	4.1E+02	17.0%	2.4E-01	4.7%	2.5E+00	14.1%	7.5E+00	17.1%
Total Fats[a]	7.8E+00	1.9%	1.4E+01	1.3%	2.6E+01	1.1%	9.1E-02	1.8%	2.5E-01	1.4%	4.4E-01	1.0%

a Includes added fats such as butter, margarine, dressings and sauces, vegetable oil, etc.; does not include fats eaten as components of other foods such as meats.

Source: Based on U.S. EPA analysis of 1994-96 CSFII.

Table 3-22. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Meat Intake

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
	Age <1 Year (g/day, as consumed)						Age <1 Year (g/kg/day, as consumed)					
Total Foods	8.0E+02	100.0%	7.6E+02	100.0%	1.3E+03	100.0%	1.2E+02	100.0%	1.1E+02	100.0%	1.4E+02	100.0%
Total Dairy	6.5E+02	80.9%	6.5E+02	85.9%	7.9E+02	61.0%	1.1E+02	84.7%	1.0E+02	89.8%	8.9E+01	61.9%
Total Meats	0.0E+00	0.0%	0.0E+00	0.0%	5.8E+01	4.4%	0.0E+00	0.0%	0.0E+00	0.0%	6.2E+00	4.3%
Total Fish	0.0E+00	0.0%	0.0E+00	0.0%	4.6E+00	0.4%	0.0E+00	0.0%	0.0E+00	0.0%	5.3E-01	0.4%
Total Eggs	0.0E+00	0.0%	3.5E-01	0.0%	1.6E+01	1.2%	0.0E+00	0.0%	3.9E-02	0.0%	1.4E+00	1.0%
Total Grains	8.0E+00	1.0%	8.8E+00	1.2%	1.0E+02	7.9%	1.1E+00	0.9%	8.1E-01	0.7%	1.0E+01	7.2%
Total Vegetables	3.5E+01	4.3%	2.7E+01	3.5%	1.4E+02	10.4%	4.3E+00	3.4%	2.6E+00	2.3%	1.7E+01	11.5%
Total Fruits	1.1E+02	13.8%	7.0E+01	9.3%	1.9E+02	14.5%	1.4E+01	11.0%	7.9E+00	7.1%	1.9E+01	13.4%
Total Fats[a]	0.0E+00	0.0%	8.3E-03	0.0%	2.7E+00	0.2%	0.0E+00	0.0%	8.0E-04	0.0%	3.0E-01	0.2%
	Ages 1-2 Years (g/day, as consumed)						Ages 1-2 Years (g/kg/day, as consumed)					
Total Foods	1.0E+03	100.0%	1.0E+03	100.0%	1.2E+03	100.0%	5.6E+01	100%	8.4E+01	100.0%	1.0E+02	100.0%
Total Dairy	5.9E+02	56.9%	4.8E+02	45.8%	4.3E+02	35.6%	3.2E+01	57%	3.6E+01	42.9%	3.9E+01	38.9%
Total Meats	5.9E+00	0.6%	5.2E+01	5.0%	1.5E+02	12.5%	1.6E-01	0%	3.9E+00	4.7%	1.1E+01	11.3%
Total Fish	3.3E+00	0.3%	5.5E+00	0.5%	7.9E+00	0.6%	9.8E-02	0%	4.0E-01	0.5%	7.0E-01	0.7%
Total Eggs	1.0E+01	1.0%	1.5E+01	1.4%	2.2E+01	1.8%	4.0E-01	1%	1.4E+00	1.7%	1.4E+00	1.4%
Total Grains	1.0E+02	9.7%	1.4E+02	13.6%	1.7E+02	14.3%	4.7E+00	8%	1.1E+01	13.4%	1.4E+01	13.8%
Total Vegetables	1.0E+02	9.8%	1.1E+02	10.8%	1.7E+02	13.7%	6.1E+00	11%	9.7E+00	11.5%	1.3E+01	13.4%
Total Fruits	2.2E+02	21.6%	2.3E+02	22.4%	2.5E+02	20.8%	1.2E+01	22%	2.1E+01	24.7%	2.0E+01	19.9%
Total Fats[a]	2.4E+00	0.2%	5.4E+00	0.5%	7.9E+00	0.7%	8.4E-02	0%	4.3E-01	0.5%	6.1E-01	0.6%
	Ages 3-5 Years (g/day, as consumed)						Ages 3-5 Years (g/kg/day, as consumed)					
Total Foods	9.7E+02	100.0%	9.6E+02	100.0%	1.3E+03	100.0%	1.8E+01	100.0%	5.8E+01	100.0%	7.5E+01	100.0%
Total Dairy	4.0E+02	41.3%	3.7E+02	38.8%	3.7E+02	29.9%	7.9E+00	44.6%	2.3E+01	40.2%	2.4E+01	31.7%
Total Meats	1.3E+01	1.4%	7.0E+01	7.3%	1.9E+02	14.9%	7.8E-02	0.4%	3.8E+00	6.5%	1.0E+01	13.9%
Total Fish	6.5E+00	0.7%	4.6E+00	0.5%	7.7E+00	0.6%	1.2E-01	0.7%	4.0E-01	0.7%	2.8E-01	0.4%
Total Eggs	1.2E+01	1.2%	1.6E+01	1.6%	1.9E+01	1.5%	1.4E-01	0.8%	6.6E-01	1.1%	1.0E+00	1.4%
Total Grains	1.9E+02	19.6%	1.7E+02	17.8%	2.3E+02	18.7%	3.2E+00	17.7%	9.9E+00	17.1%	1.4E+01	18.5%
Total Vegetables	1.1E+02	10.9%	1.4E+02	14.5%	1.9E+02	14.9%	1.6E+00	9.0%	7.5E+00	13.0%	1.1E+01	15.3%
Total Fruits	2.4E+02	24.4%	1.8E+02	18.7%	2.3E+02	18.7%	4.7E+00	26.5%	1.2E+01	20.7%	1.3E+01	18.1%
Total Fats[a]	4.8E+00	0.5%	7.2E+00	0.7%	1.1E+01	0.9%	6.3E-02	0.4%	4.1E-01	0.7%	6.1E-01	0.8%
	Ages 6-11 Years (g/day, as consumed)						Ages 6-11 Years (g/kg/day, as consumed)					
Total Foods	1.0E+03	100.0%	1.1E+03	100.0%	1.3E+03	100.0%	1.3E+01	100.0%	3.4E+01	100.0%	5.2E+01	100.0%
Total Dairy	4.3E+02	42.6%	4.3E+02	39.4%	4.3E+02	32.1%	5.5E+00	42.9%	1.3E+01	38.7%	1.8E+01	34.8%
Total Meats	1.6E+01	1.6%	8.8E+01	8.0%	2.2E+02	16.7%	5.8E-02	0.4%	2.6E+00	7.5%	7.7E+00	14.7%
Total Fish	4.7E+00	0.5%	8.7E+00	0.8%	8.8E+00	0.7%	9.7E-02	0.8%	2.8E-01	0.8%	3.0E-01	0.6%
Total Eggs	1.1E+01	1.1%	1.2E+01	1.1%	1.5E+01	1.1%	1.7E-01	1.3%	5.0E-01	1.5%	6.7E-01	1.3%
Total Grains	2.2E+02	21.4%	2.1E+02	19.6%	2.5E+02	18.6%	2.8E+00	21.7%	6.9E+00	20.0%	9.8E+00	18.9%
Total Vegetables	1.4E+02	13.4%	1.8E+02	16.0%	2.5E+02	18.3%	1.9E+00	14.7%	5.2E+00	15.2%	8.7E+00	16.7%
Total Fruits	1.9E+02	18.6%	1.6E+02	14.1%	1.6E+02	11.7%	2.3E+00	17.6%	5.2E+00	15.3%	6.3E+00	12.2%
Total Fats[a]	8.0E+00	0.8%	1.1E+01	1.0%	1.2E+01	0.9%	7.8E-02	0.6%	3.3E-01	0.9%	4.4E-01	0.8%
	Ages 12-19 Years (g/day, as consumed)						Ages 12-19 Years (g/kg/day, as consumed)					

Table 3-22. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Meat Intake (continued)

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
Total Foods	9.3E+02	100.0%	1.1E+03	100.0%	1.7E+03	100.0%	1.3E+01	100.0%	2.0E+01	100.0%	3.0E+01	100.0%
Total Dairy	3.1E+02	33.4%	3.5E+02	31.2%	3.7E+02	22.2%	4.3E+00	33.8%	6.1E+00	30.9%	7.4E+00	24.6%
Total Meats	1.9E+01	2.0%	1.2E+02	10.3%	3.3E+02	19.8%	2.3E-01	1.8%	1.9E+00	9.6%	5.5E+00	18.2%
Total Fish	8.2E+00	0.9%	9.6E+00	0.9%	1.7E+01	1.0%	9.5E-02	0.7%	2.4E-01	1.2%	2.7E-01	0.9%
Total Eggs	1.1E+01	1.2%	1.0E+01	0.9%	2.8E+01	1.7%	1.6E-01	1.3%	2.4E-01	1.2%	4.2E-01	1.4%
Total Grains	2.2E+02	23.7%	2.5E+02	22.7%	3.5E+02	21.1%	3.2E+00	24.9%	4.4E+00	22.2%	6.4E+00	21.2%
Total Vegetables	1.9E+02	20.0%	2.2E+02	19.3%	3.8E+02	22.7%	2.5E+00	19.9%	3.7E+00	18.8%	6.2E+00	20.7%
Total Fruits	1.6E+02	17.6%	1.5E+02	13.4%	1.7E+02	10.1%	2.1E+00	16.3%	2.9E+00	14.7%	3.6E+00	11.8%
Total Fats[a]	1.2E+01	1.3%	1.4E+01	1.3%	2.4E+01	1.5%	1.6E-01	1.2%	2.7E-01	1.4%	3.9E-01	1.3%

a Includes added fats such as butter, margarine, dressings and sauces, vegetable oil, etc.; does not include fats eaten as components of other foods such as meats.

Source: Based on U.S. EPA analysis of 1994-96 CSFII.

Table 3-23. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Meat and Dairy Intake

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
	Age <1 Year (g/day, as consumed)						Age <1 Year (g/kg/day, as consumed)					
Total Foods	4.2E+01	100.0%	1.0E+03	100.0%	1.7E+03	100.0%	5.6E+00	100.0%	1.3E+02	100.0%	2.5E+02	100.0%
Total Dairy	0.0E+00	0.0%	7.8E+02	74.9%	1.5E+03	89.2%	0.0E+00	0.0%	9.4E+01	73.0%	2.5E+02	98.8%
Total Meats	0.0E+00	0.0%	1.3E+01	1.3%	5.9E+00	0.3%	0.0E+00	0.0%	1.7E+00	1.3%	3.0E-02	0.0%
Total Fish	0.0E+00	0.0%	2.0E+00	0.2%	2.6E-01	0.0%	0.0E+00	0.0%	2.2E-01	0.2%	4.3E-03	0.0%
Total Eggs	0.0E+00	0.0%	6.0E+00	0.6%	1.0E+00	0.1%	0.0E+00	0.0%	2.9E-01	0.2%	1.1E-03	0.0%
Total Grains	3.5E+00	8.5%	5.2E+01	4.9%	3.2E+01	1.9%	4.8E-01	8.6%	5.0E+00	3.9%	7.7E-01	0.3%
Total Vegetables	1.1E+01	25.7%	7.1E+01	6.8%	5.1E+01	3.0%	1.7E+00	29.9%	9.2E+00	7.1%	9.6E-01	0.4%
Total Fruits	2.7E+01	65.8%	1.2E+02	11.2%	9.4E+01	5.5%	3.4E+00	61.5%	1.8E+01	14.2%	1.4E+00	0.5%
Total Fats[a]	0.0E+00	0.0%	1.1E+00	0.1%	3.3E-01	0.0%	0.0E+00	0.0%	8.5E-02	0.1%	6.7E-03	0.0%
	Ages 1-2 Years (g/day, as consumed)						Ages 1-2 Years (g/kg/day, as consumed)					
Total Foods	7.2E+02	100.0%	1.1E+03	100.0%	1.7E+03	100.0%	3.2E+01	100%	8.3E+01	100.0%	1.5E+02	100.0%
Total Dairy	7.4E+01	10.3%	4.2E+02	39.6%	1.1E+03	66.4%	2.4E+00	7%	3.2E+01	38.3%	9.7E+01	66.7%
Total Meats	4.9E+01	6.7%	6.2E+01	5.8%	5.9E+01	3.5%	1.9E+00	6%	5.0E+00	6.0%	4.9E+00	3.4%
Total Fish	3.7E+00	0.5%	5.7E+00	0.5%	4.4E+00	0.3%	7.6E-02	0%	3.5E-01	0.4%	4.0E-01	0.3%
Total Eggs	2.0E+01	2.8%	1.6E+01	1.5%	1.5E+01	0.9%	1.1E+00	3%	1.3E+00	1.6%	1.3E+00	0.9%
Total Grains	1.6E+02	22.8%	1.6E+02	14.8%	1.3E+02	7.9%	7.5E+00	24%	1.2E+01	14.3%	1.1E+01	7.7%
Total Vegetables	1.2E+02	16.9%	1.2E+02	11.0%	1.3E+02	7.6%	5.5E+00	17%	1.1E+01	12.7%	1.2E+01	8.0%
Total Fruits	2.8E+02	39.3%	2.8E+02	26.2%	2.2E+02	13.0%	1.3E+01	41%	2.2E+01	26.2%	1.9E+01	12.7%
Total Fats[a]	4.6E+00	0.6%	5.8E+00	0.5%	5.3E+00	0.3%	2.1E-01	1%	4.7E-01	0.6%	4.1E-01	0.3%
	Ages 3-5 Years (g/day, as consumed)						Ages 3-5 Years (g/kg/day, as consumed)					
Total Foods	7.0E+02	100.0%	9.8E+02	100.0%	1.6E+03	100.0%	1.3E+01	100.0%	5.5E+01	100.0%	9.5E+01	100.0%
Total Dairy	7.8E+01	11.2%	3.6E+02	37.1%	8.9E+02	55.4%	7.9E-01	6.2%	1.9E+01	34.3%	5.2E+01	54.9%
Total Meats	5.9E+01	8.4%	7.5E+01	7.6%	8.7E+01	5.4%	8.4E-01	6.6%	4.6E+00	8.4%	5.5E+00	5.9%
Total Fish	5.9E+00	0.8%	7.5E+00	0.8%	6.7E+00	0.4%	6.8E-02	0.5%	3.5E-01	0.6%	3.2E-01	0.3%
Total Eggs	1.4E+01	2.0%	1.5E+01	1.5%	1.7E+01	1.1%	2.9E-01	2.3%	7.6E-01	1.4%	8.3E-01	0.9%
Total Grains	1.8E+02	26.1%	1.8E+02	18.4%	2.2E+02	13.5%	3.2E+00	25.7%	1.1E+01	19.4%	1.3E+01	14.1%
Total Vegetables	1.3E+02	17.9%	1.3E+02	13.3%	1.5E+02	9.4%	2.4E+00	18.9%	7.8E+00	14.3%	9.2E+00	9.8%
Total Fruits	2.3E+02	32.6%	2.0E+02	20.5%	2.3E+02	14.2%	4.9E+00	38.6%	1.1E+01	20.9%	1.3E+01	13.7%
Total Fats[a]	6.6E+00	0.9%	7.5E+00	0.8%	8.9E+00	0.6%	1.5E-01	1.1%	4.1E-01	0.8%	4.5E-01	0.5%
	Ages 6-11 Years (g/day, as consumed)						Ages 6-11 Years (g/kg/day, as consumed)					
Total Foods	7.2E+02	100.0%	1.1E+03	100.0%	1.8E+03	100.0%	5.9E+00	100.0%	3.5E+01	100.0%	6.7E+01	100.0%
Total Dairy	8.4E+01	11.7%	3.9E+02	36.7%	9.1E+02	51.2%	4.4E-01	7.4%	1.2E+01	33.7%	3.4E+01	51.3%
Total Meats	7.2E+01	10.0%	1.0E+02	9.5%	1.2E+02	7.0%	5.7E-01	9.6%	3.3E+00	9.4%	4.6E+00	6.9%
Total Fish	9.9E+00	1.4%	6.8E+00	0.6%	8.6E+00	0.5%	3.7E-02	0.6%	2.5E-01	0.7%	3.0E-01	0.5%
Total Eggs	1.3E+01	1.8%	1.4E+01	1.4%	1.5E+01	0.8%	1.6E-01	2.7%	5.7E-01	1.6%	6.0E-01	0.9%
Total Grains	1.9E+02	26.2%	2.2E+02	20.9%	2.8E+02	16.0%	1.6E+00	27.7%	7.7E+00	21.9%	1.1E+01	16.6%
Total Vegetables	1.7E+02	23.0%	1.7E+02	15.9%	2.0E+02	11.5%	1.5E+00	26.0%	5.4E+00	15.2%	8.1E+00	12.1%
Total Fruits	1.8E+02	24.6%	1.5E+02	14.0%	2.2E+02	12.2%	1.5E+00	24.7%	5.8E+00	16.5%	7.3E+00	11.0%
Total Fats[a]	9.8E+00	1.4%	9.6E+00	0.9%	1.3E+01	0.7%	8.5E-02	1.4%	3.6E-01	1.0%	5.0E-01	0.8%
	Ages 12-19 Years (g/day, as consumed)						Ages 12-19 Years (g/kg/day, as consumed)					

Table 3-23. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Meat and Dairy Intake (continued)

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
Total Foods	6.2E+02	100.0%	1.1E+03	100.0%	2.2E+03	100.0%	7.9E+00	100.0%	1.8E+01	100.0%	3.9E+01	100.0%
Total Dairy	3.0E+01	4.9%	2.7E+02	25.0%	1.0E+03	47.4%	3.7E-01	4.7%	4.4E+00	24.4%	1.9E+01	47.6%
Total Meats	5.6E+01	9.1%	1.4E+02	13.0%	2.0E+02	9.0%	6.6E-01	8.4%	2.2E+00	12.4%	3.3E+00	8.4%
Total Fish	8.2E+00	1.3%	9.3E+00	0.9%	1.3E+01	0.6%	1.3E-01	1.6%	1.9E-01	1.0%	2.5E-01	0.6%
Total Eggs	2.0E+01	3.2%	1.8E+01	1.6%	2.2E+01	1.0%	2.3E-01	2.9%	2.4E-01	1.4%	3.9E-01	1.0%
Total Grains	1.8E+02	28.7%	2.6E+02	24.4%	3.6E+02	16.6%	2.4E+00	30.2%	4.5E+00	25.1%	6.7E+00	17.0%
Total Vegetables	1.7E+02	28.2%	2.3E+02	21.5%	3.3E+02	15.2%	2.1E+00	27.3%	3.6E+00	19.9%	5.6E+00	14.3%
Total Fruits	1.4E+02	22.9%	1.3E+02	12.2%	2.0E+02	9.2%	1.8E+00	23.1%	2.6E+00	14.6%	4.0E+00	10.2%
Total Fats[a]	9.9E+00	1.6%	1.5E+01	1.4%	2.2E+01	1.0%	1.4E-01	1.7%	2.2E-01	1.2%	3.7E-01	0.9%

a Includes added fats such as butter, margarine, dressings and sauces, vegetable oil, etc.; does not include fats eaten as components of other foods such as meats.

Source: Based on U.S. EPA analysis of 1994-96 CSFII.

Table 3-24. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Fish Intake

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
	Age <1 Year (g/day, as consumed)						Age <1 Year (g/kg/day, as consumed)					
Total Foods	8.8E+02	100.0%	8.4E+02	100.0%	1.2E+03	100.0%	1.3E+02	100.0%	1.2E+02	100.0%	1.4E+02	100.0%
Total Dairy	6.9E+02	78.0%	7.0E+02	83.0%	6.8E+02	58.5%	1.1E+02	82.0%	1.0E+02	85.8%	8.1E+01	59.2%
Total Meats	3.6E+00	0.4%	7.7E+00	0.9%	3.7E+01	3.2%	4.0E-01	0.3%	7.7E-01	0.7%	4.3E+00	3.1%
Total Fish	0.0E+00	0.0%	0.0E+00	0.0%	6.7E+00	0.6%	0.0E+00	0.0%	0.0E+00	0.0%	7.7E-01	0.6%
Total Eggs	1.1E+00	0.1%	3.2E+00	0.4%	7.2E+00	0.6%	1.3E-01	0.1%	3.7E-01	0.3%	7.7E-01	0.6%
Total Grains	1.4E+01	1.6%	3.0E+01	3.5%	9.2E+01	7.9%	1.6E+00	1.2%	3.6E+00	3.0%	1.1E+01	7.8%
Total Vegetables	4.4E+01	5.0%	4.8E+01	5.7%	1.4E+02	12.0%	5.6E+00	4.2%	5.3E+00	4.5%	1.7E+01	12.7%
Total Fruits	1.3E+02	14.9%	5.3E+01	6.3%	2.0E+02	16.9%	1.6E+01	12.2%	6.5E+00	5.5%	2.2E+01	15.8%
Total Fats[a]	1.3E-01	0.0%	8.3E-01	0.1%	2.9E+00	0.2%	1.7E-02	0.0%	1.2E-01	0.1%	3.3E-01	1.3E+02
	Ages 1-2 Years (g/day, as consumed)						Ages 1-2 Years (g/kg/day, as consumed)					
Total Foods	1.1E+03	100.0%	9.5E+02	100.0%	1.2E+03	100.0%	8.4E+01	100%	7.8E+01	100.0%	9.4E+01	100.0%
Total Dairy	4.5E+02	41.1%	4.5E+02	48.0%	4.6E+02	39.1%	3.6E+01	43%	3.8E+01	48.7%	3.7E+01	40.0%
Total Meats	5.5E+01	5.0%	4.7E+01	5.0%	7.4E+01	6.3%	4.0E+00	5%	3.8E+00	4.9%	6.1E+00	6.5%
Total Fish	0.0E+00	0.0%	1.2E+00	0.1%	3.7E+01	3.1%	0.0E+00	0%	7.9E-02	0.1%	2.8E+00	2.9%
Total Eggs	1.6E+01	1.4%	1.2E+01	1.3%	1.6E+01	1.4%	1.1E+00	1%	9.2E-01	1.2%	1.3E+00	1.3%
Total Grains	1.6E+02	14.4%	1.3E+02	13.7%	1.6E+02	13.5%	1.2E+01	14%	1.0E+01	12.9%	1.3E+01	13.5%
Total Vegetables	1.2E+02	10.6%	1.1E+02	11.4%	1.4E+02	12.0%	8.5E+00	10%	8.7E+00	11.2%	1.1E+01	12.1%
Total Fruits	3.0E+02	27.0%	1.9E+02	20.0%	2.8E+02	24.0%	2.3E+01	27%	1.6E+01	20.7%	2.2E+01	23.1%
Total Fats[a]	5.2E+00	0.5%	4.5E+00	0.5%	6.7E+00	0.6%	3.8E-01	0%	3.4E-01	0.4%	5.5E-01	0.6%
	Ages 3-5 Years (g/day, as consumed)						Ages 3-5 Years (g/kg/day, as consumed)					
Total Foods	1.1E+03	100.0%	9.4E+02	100.0%	1.1E+03	100.0%	5.9E+01	100.0%	5.5E+01	100.0%	6.4E+01	100.0%
Total Dairy	4.1E+02	38.7%	3.5E+02	37.7%	4.0E+02	35.7%	2.2E+01	38.2%	2.1E+01	38.2%	2.4E+01	36.6%
Total Meats	6.5E+01	6.1%	7.4E+01	7.9%	8.4E+01	7.4%	3.5E+00	6.0%	4.3E+00	7.8%	4.6E+00	7.2%
Total Fish	0.0E+00	0.0%	1.6E+00	0.2%	4.2E+01	3.7%	0.0E+00	0.0%	6.2E-02	0.1%	2.2E+00	3.5%
Total Eggs	1.0E+01	1.0%	1.2E+01	1.3%	1.4E+01	1.3%	5.6E-01	1.0%	5.5E-01	1.0%	7.7E-01	1.2%
Total Grains	2.2E+02	20.6%	1.7E+02	18.4%	2.0E+02	17.6%	1.2E+01	21.3%	1.0E+01	18.6%	1.1E+01	17.3%
Total Vegetables	1.3E+02	11.7%	1.3E+02	14.3%	1.6E+02	14.4%	6.9E+00	11.8%	6.9E+00	12.6%	9.3E+00	14.5%
Total Fruits	2.3E+02	21.2%	1.8E+02	19.5%	2.2E+02	19.2%	1.2E+01	21.0%	1.1E+01	20.9%	1.2E+01	18.9%
Total Fats[a]	7.1E+00	0.7%	6.9E+00	0.7%	9.9E+00	0.9%	3.9E-01	0.7%	3.8E-01	0.7%	5.5E-01	0.9%
	Ages 6-11 Years (g/day, as consumed)						Ages 6-11 Years (g/kg/day, as consumed)					
Total Foods	1.1E+03	100.0%	1.1E+03	100.0%	1.2E+03	100.0%	3.7E+01	100.0%	3.3E+01	100.0%	4.3E+01	100.0%
Total Dairy	4.5E+02	41.6%	4.3E+02	40.4%	4.2E+02	34.6%	1.5E+01	41.5%	1.2E+01	37.0%	1.6E+01	36.5%
Total Meats	9.1E+01	8.3%	8.0E+01	7.6%	1.0E+02	8.4%	3.0E+00	8.2%	2.8E+00	8.4%	3.8E+00	8.7%
Total Fish	0.0E+00	0.0%	2.2E+00	0.2%	5.7E+01	4.7%	0.0E+00	0.0%	5.3E-02	0.2%	1.7E+00	3.9%
Total Eggs	1.1E+01	1.0%	1.3E+01	1.2%	1.6E+01	1.3%	3.7E-01	1.0%	3.8E-01	1.2%	5.2E-01	1.2%
Total Grains	2.1E+02	19.3%	2.2E+02	20.5%	2.3E+02	18.7%	6.9E+00	19.0%	7.0E+00	21.3%	8.0E+00	18.5%
Total Vegetables	1.3E+02	11.4%	1.6E+02	15.3%	1.8E+02	14.6%	4.1E+00	11.3%	5.4E+00	16.6%	6.4E+00	14.8%
Total Fruits	1.9E+02	17.5%	1.5E+02	13.9%	2.0E+02	16.8%	6.6E+00	18.1%	4.7E+00	14.4%	6.7E+00	15.4%
Total Fats[a]	9.6E+00	0.9%	8.6E+00	0.8%	1.1E+01	0.9%	3.2E-01	0.9%	2.9E-01	0.9%	3.8E-01	0.9%
	Ages 12-19 Years (g/day, as consumed)						Ages 12-19 Years (g/kg/day, as consumed)					

Table 3-24. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Fish Intake (continued)

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
Total Foods	1.1E+03	100.0%	1.1E+03	100.0%	1.4E+03	100.0%	1.9E+01	100.0%	1.8E+01	100.0%	2.5E+01	100.0%
Total Dairy	4.1E+02	36.2%	3.3E+02	30.9%	3.3E+02	23.2%	7.0E+00	36.5%	5.7E+00	32.0%	6.3E+00	24.7%
Total Meats	1.1E+02	9.5%	1.2E+02	11.2%	1.7E+02	11.9%	1.8E+00	9.4%	1.8E+00	10.3%	3.0E+00	11.6%
Total Fish	0.0E+00	0.0%	3.4E+00	0.3%	7.5E+01	5.2%	0.0E+00	0.0%	5.4E-02	0.3%	1.2E+00	4.8%
Total Eggs	1.4E+01	1.2%	1.5E+01	1.4%	2.1E+01	1.4%	2.3E-01	1.2%	2.4E-01	1.3%	3.5E-01	1.4%
Total Grains	2.4E+02	21.1%	2.4E+02	22.2%	2.9E+02	20.5%	4.0E+00	20.7%	3.9E+00	21.6%	5.5E+00	21.7%
Total Vegetables	2.0E+02	17.9%	2.1E+02	20.0%	3.1E+02	21.7%	3.4E+00	17.6%	3.4E+00	19.3%	5.2E+00	20.3%
Total Fruits	1.5E+02	12.9%	1.3E+02	12.7%	2.1E+02	14.5%	2.6E+00	13.5%	2.5E+00	13.9%	3.6E+00	14.0%
Total Fats[a]	1.4E+01	1.2%	1.3E+01	1.3%	2.2E+01	1.5%	2.2E-01	1.2%	2.1E-01	1.2%	3.7E-01	1.5%

a Includes added fats such as butter, margarine, dressings and sauces, vegetable oil, etc.; does not include fats eaten as components of other foods such as meats.

Source: Based on U.S. EPA analysis of 1994-96 CSFII.

Table 3-25. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Fruit and Vegetable Intake

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
	Age <1 Year (g/day, as consumed)						Age <1 Year (g/kg/day, as consumed)					
Total Foods	6.7E+02	100.0%	8.9E+02	100.0%	1.3E+03	100.0%	1.3E+02	100.0%	1.1E+02	100.0%	1.6E+02	100.0%
Total Dairy	6.7E+02	99.5%	7.2E+02	81.4%	7.0E+02	51.9%	1.3E+02	99.6%	9.0E+01	84.6%	8.1E+01	52.0%
Total Meats	0.0E+00	0.0%	1.2E+01	1.3%	2.1E+01	1.5%	0.0E+00	0.0%	1.1E+00	1.1%	2.0E+00	1.3%
Total Fish	0.0E+00	0.0%	6.3E-01	0.1%	2.3E+00	0.2%	0.0E+00	0.0%	6.8E-02	0.1%	2.0E-01	0.1%
Total Eggs	0.0E+00	0.0%	9.4E+00	1.1%	7.1E+00	0.5%	0.0E+00	0.0%	9.1E-01	0.9%	2.5E-01	0.2%
Total Grains	3.1E+00	0.5%	4.5E+01	5.1%	6.4E+01	4.7%	5.5E-01	0.4%	4.2E+00	4.0%	7.4E+00	4.8%
Total Vegetables	0.0E+00	0.0%	4.9E+01	5.5%	1.6E+02	11.9%	0.0E+00	0.0%	4.3E+00	4.1%	2.1E+01	13.6%
Total Fruits	0.0E+00	0.0%	4.9E+01	5.5%	3.9E+02	29.2%	0.0E+00	0.0%	5.7E+00	5.3%	4.3E+01	28.0%
Total Fats[a]	0.0E+00	0.0%	7.6E-01	0.1%	1.2E+00	0.1%	0.0E+00	0.0%	7.9E-02	0.1%	1.2E-01	0.1%
	Ages 1-2 Years (g/day, as consumed)						Ages 1-2 Years (g/kg/day, as consumed)					
Total Foods	7.5E+02	100.0%	1.0E+03	100.0%	1.6E+03	100.0%	3.4E+01	100%	8.3E+01	100.0%	1.3E+02	100.0%
Total Dairy	4.7E+02	63.5%	4.6E+02	44.3%	4.4E+02	27.8%	2.3E+01	66%	3.8E+01	45.5%	3.8E+01	29.1%
Total Meats	5.4E+01	7.3%	6.4E+01	6.1%	6.4E+01	4.0%	2.5E+00	7%	5.2E+00	6.2%	5.1E+00	3.9%
Total Fish	4.1E+00	0.5%	7.5E+00	0.7%	7.8E+00	0.5%	1.5E-01	0%	6.1E-01	0.7%	4.3E-01	0.3%
Total Eggs	1.5E+01	2.0%	1.3E+01	1.3%	2.1E+01	1.3%	7.4E-01	2%	1.2E+00	1.5%	1.8E+00	1.4%
Total Grains	1.2E+02	16.3%	1.6E+02	15.0%	1.5E+02	9.5%	5.6E+00	16%	1.2E+01	14.7%	1.3E+01	9.9%
Total Vegetables	5.7E+01	7.6%	1.2E+02	11.5%	2.0E+02	12.7%	2.1E+00	6%	9.5E+00	11.4%	1.7E+01	12.9%
Total Fruits	1.7E+01	2.3%	2.1E+02	20.6%	6.9E+02	43.7%	4.1E-01	1%	1.6E+01	19.5%	5.6E+01	42.2%
Total Fats[a]	3.9E+00	0.5%	5.5E+00	0.5%	6.4E+00	0.4%	1.5E-01	0%	3.8E-01	0.5%	5.2E-01	0.4%
	Ages 3-5 Years (g/day, as consumed)						Ages 3-5 Years (g/kg/day, as consumed)					
Total Foods	7.0E+02	100.0%	1.0E+03	100.0%	1.6E+03	100.0%	1.2E+01	100.0%	5.4E+01	100.0%	9.6E+01	100.0%
Total Dairy	3.9E+02	56.3%	3.9E+02	39.4%	4.1E+02	26.2%	7.1E+00	57.5%	2.2E+01	40.9%	2.6E+01	26.9%
Total Meats	6.5E+01	9.3%	8.2E+01	8.3%	8.4E+01	5.4%	1.1E+00	9.2%	4.7E+00	8.7%	5.0E+00	5.3%
Total Fish	5.2E+00	0.7%	7.5E+00	0.8%	8.7E+00	0.6%	9.6E-02	0.8%	3.5E-01	0.6%	4.8E-01	0.5%
Total Eggs	1.1E+01	1.5%	1.2E+01	1.2%	2.3E+01	1.4%	1.9E-01	1.5%	5.0E-01	0.9%	1.1E+00	1.2%
Total Grains	1.5E+02	22.1%	1.9E+02	19.4%	2.1E+02	13.4%	3.1E+00	25.1%	1.0E+01	19.0%	1.3E+01	13.9%
Total Vegetables	5.4E+01	7.8%	1.5E+02	14.7%	2.2E+02	14.3%	6.0E-01	4.9%	7.1E+00	13.1%	1.3E+01	14.0%
Total Fruits	1.0E+01	1.5%	1.5E+02	15.5%	6.0E+02	38.0%	3.0E-02	0.2%	8.6E+00	15.9%	3.6E+01	37.7%
Total Fats[a]	4.9E+00	0.7%	8.1E+00	0.8%	1.1E+01	0.7%	8.2E-02	0.7%	4.5E-01	0.8%	6.0E-01	0.6%
	Ages 6-11 Years (g/day, as consumed)						Ages 6-11 Years (g/kg/day, as consumed)					
Total Foods	7.3E+02	100.0%	1.1E+03	100.0%	1.7E+03	100.0%	6.5E+00	100.0%	3.5E+01	100.0%	6.3E+01	100.0%
Total Dairy	3.7E+02	51.0%	4.5E+02	40.4%	4.6E+02	27.2%	3.2E+00	50.3%	1.5E+01	42.7%	1.8E+01	29.4%
Total Meats	7.5E+01	10.3%	1.0E+02	9.0%	1.0E+02	6.1%	6.6E-01	10.2%	3.2E+00	9.2%	3.9E+00	6.2%
Total Fish	9.7E+00	1.3%	9.8E+00	0.9%	1.1E+01	0.7%	3.5E-02	0.5%	2.4E-01	0.7%	3.5E-01	0.6%
Total Eggs	1.0E+01	1.4%	1.2E+01	1.1%	1.8E+01	1.0%	1.3E-01	2.0%	3.5E-01	1.0%	7.4E-01	1.2%
Total Grains	1.8E+02	25.5%	2.4E+02	21.2%	2.5E+02	15.0%	1.9E+00	29.6%	7.1E+00	20.5%	1.0E+01	16.2%
Total Vegetables	6.2E+01	8.5%	1.7E+02	15.0%	3.0E+02	17.9%	3.9E-01	6.0%	4.8E+00	13.8%	1.1E+01	17.2%
Total Fruits	8.6E+00	1.2%	1.3E+02	11.5%	5.3E+02	31.3%	4.1E-02	0.6%	3.9E+00	11.1%	1.8E+01	28.6%
Total Fats[a]	5.2E+00	0.7%	1.1E+01	1.0%	1.4E+01	0.9%	3.9E-02	0.6%	3.1E-01	0.9%	4.9E-01	0.8%
	Ages 12-19 Years (g/day, as consumed)						Ages 12-19 Years (g/kg/day, as consumed)					

Table 3-25. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Fruit and Vegetable Intake (continued)

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
Total Foods	6.8E+02	100.0%	1.1E+03	100.0%	2.1E+03	100.0%	8.4E+00	100.0%	1.8E+01	100.0%	3.8E+01	100.0%
Total Dairy	2.9E+02	42.5%	3.4E+02	31.4%	4.5E+02	21.7%	3.6E+00	43.2%	6.1E+00	32.8%	8.5E+00	22.6%
Total Meats	1.0E+02	15.2%	1.3E+02	11.7%	1.8E+02	8.7%	1.3E+00	15.0%	2.3E+00	12.2%	2.9E+00	7.7%
Total Fish	5.0E+00	0.7%	1.1E+01	1.0%	2.0E+01	1.0%	6.9E-02	0.8%	2.0E-01	1.1%	3.3E-01	0.9%
Total Eggs	1.3E+01	1.9%	1.8E+01	1.7%	2.4E+01	1.1%	1.5E-01	1.8%	2.7E-01	1.5%	4.3E-01	1.1%
Total Grains	2.0E+02	28.5%	2.6E+02	23.7%	3.6E+02	17.1%	2.4E+00	28.5%	4.3E+00	23.2%	6.8E+00	18.1%
Total Vegetables	6.6E+01	9.6%	2.4E+02	22.2%	4.5E+02	21.6%	7.6E-01	9.1%	4.0E+00	21.8%	7.8E+00	20.7%
Total Fruits	3.3E+00	0.5%	7.5E+01	6.9%	5.8E+02	27.5%	4.5E-02	0.5%	1.1E+00	6.0%	1.0E+01	27.7%
Total Fats[a]	7.6E+00	1.1%	1.6E+01	1.5%	2.5E+01	1.2%	8.6E-02	1.0%	2.6E-01	1.4%	4.2E-01	1.1%

a Includes added fats such as butter, margarine, dressings and sauces, vegetable oil, etc.; does not include fats eaten as components of other foods such as meats.

Source: Based on U.S. EPA analysis of 1994-96 CSFII.

Table 3-26. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Dairy Intake

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
	Age <1 Year (g/day, as consumed)						Age <1 Year (g/kg/day, as consumed)					
Total Foods	2.2E+01	100.0%	1.0E+03	100.0%	1.7E+03	100.0%	2.5E+00	100.0%	1.3E+02	100.0%	2.5E+02	100.0%
Total Dairy	0.0E+00	0.0%	7.8E+02	74.4%	1.5E+03	89.2%	0.0E+00	0.0%	9.4E+01	73.4%	2.5E+02	98.8%
Total Meats	0.0E+00	0.0%	1.4E+01	1.4%	5.9E+00	0.3%	0.0E+00	0.0%	1.9E+00	1.5%	3.0E-02	0.0%
Total Fish	0.0E+00	0.0%	1.8E+00	0.2%	2.6E-01	0.0%	0.0E+00	0.0%	3.1E-01	0.2%	4.3E-03	0.0%
Total Eggs	0.0E+00	0.0%	4.4E+00	0.4%	1.0E+00	0.1%	0.0E+00	0.0%	3.0E-01	0.2%	1.1E-03	0.0%
Total Grains	2.5E+00	11.7%	5.1E+01	4.9%	3.2E+01	1.9%	1.1E-01	4.6%	4.8E+00	3.8%	7.7E-01	0.3%
Total Vegetables	5.8E+00	26.9%	6.9E+01	6.6%	5.1E+01	3.0%	7.6E-01	30.4%	8.9E+00	7.0%	9.6E-01	0.4%
Total Fruits	1.3E+01	61.4%	1.3E+02	12.0%	9.4E+01	5.5%	1.6E+00	65.0%	1.8E+01	13.8%	1.4E+00	0.5%
Total Fats[a]	0.0E+00	0.0%	9.2E-01	0.1%	3.3E-01	0.0%	0.0E+00	0.0%	1.1E-01	0.1%	6.7E-03	0.0%
	Ages 1-2 Years (g/day, as consumed)						Ages 1-2 Years (g/kg/day, as consumed)					
Total Foods	7.4E+02	100.0%	1.1E+03	100.0%	1.6E+03	100.0%	3.3E+01	100%	8.2E+01	100.0%	1.4E+02	100.0%
Total Dairy	6.5E+01	8.8%	4.2E+02	39.7%	1.1E+03	67.2%	1.9E+00	6%	3.2E+01	38.7%	9.8E+01	67.6%
Total Meats	6.8E+01	9.1%	6.5E+01	6.1%	5.0E+01	3.1%	2.8E+00	8%	4.8E+00	5.9%	4.1E+00	2.8%
Total Fish	4.3E+00	0.6%	6.5E+00	0.6%	4.5E+00	0.3%	7.4E-02	0%	5.3E-01	0.7%	3.2E-01	0.2%
Total Eggs	2.4E+01	3.2%	1.7E+01	1.6%	1.5E+01	0.9%	1.2E+00	4%	1.1E+00	1.3%	1.2E+00	0.9%
Total Grains	1.7E+02	22.8%	1.5E+02	14.3%	1.3E+02	7.8%	8.0E+00	24%	1.2E+01	14.6%	1.1E+01	7.6%
Total Vegetables	1.4E+02	18.4%	1.1E+02	10.4%	1.2E+02	7.4%	6.3E+00	19%	1.0E+01	12.4%	1.1E+01	7.8%
Total Fruits	2.7E+02	36.4%	2.8E+02	26.6%	2.1E+02	13.0%	1.3E+01	39%	2.1E+01	26.0%	1.9E+01	12.9%
Total Fats[a]	5.8E+00	0.8%	5.6E+00	0.5%	5.2E+00	0.3%	2.5E-01	1%	4.1E-01	0.5%	3.8E-01	0.3%
	Ages 3-5 Years (g/day, as consumed)						Ages 3-5 Years (g/kg/day, as consumed)					
Total Foods	7.0E+02	100.0%	9.8E+02	100.0%	1.6E+03	100.0%	1.3E+01	100.0%	5.3E+01	100.0%	9.4E+01	100.0%
Total Dairy	6.6E+01	9.4%	3.6E+02	36.7%	9.0E+02	56.8%	4.8E-01	3.7%	1.9E+01	35.5%	5.2E+01	55.4%
Total Meats	8.3E+01	11.9%	8.6E+01	8.8%	7.5E+01	4.7%	1.6E+00	12.1%	4.1E+00	7.8%	4.7E+00	5.0%
Total Fish	5.3E+00	0.8%	5.9E+00	0.6%	6.2E+00	0.4%	1.0E-01	0.8%	2.9E-01	0.5%	3.4E-01	0.4%
Total Eggs	1.6E+01	2.2%	9.5E+00	1.0%	1.6E+01	1.0%	3.3E-01	2.5%	5.9E-01	1.1%	8.9E-01	0.9%
Total Grains	1.8E+02	25.8%	1.8E+02	18.8%	2.1E+02	13.2%	3.4E+00	25.5%	9.5E+00	17.9%	1.3E+01	13.9%
Total Vegetables	1.3E+02	18.4%	1.4E+02	14.7%	1.5E+02	9.2%	2.6E+00	19.9%	7.8E+00	14.7%	9.3E+00	9.9%
Total Fruits	2.2E+02	30.7%	1.8E+02	18.7%	2.2E+02	14.1%	4.5E+00	34.4%	1.1E+01	21.6%	1.3E+01	13.9%
Total Fats[a]	6.7E+00	1.0%	7.1E+00	0.7%	8.5E+00	0.5%	1.6E-01	1.2%	4.1E-01	0.8%	4.5E-01	0.5%
	Ages 6-11 Years (g/day, as consumed)						Ages 6-11 Years (g/kg/day, as consumed)					
Total Foods	7.3E+02	100.0%	1.0E+03	100.0%	1.7E+03	100.0%	7.3E+00	100.0%	3.3E+01	100.0%	6.6E+01	100.0%
Total Dairy	7.1E+01	9.7%	3.9E+02	38.0%	9.2E+02	52.6%	2.3E-01	3.2%	1.2E+01	36.4%	3.5E+01	52.9%
Total Meats	1.0E+02	14.0%	9.2E+01	9.0%	9.9E+01	5.7%	1.2E+00	16.0%	2.9E+00	8.8%	3.8E+00	5.9%
Total Fish	1.0E+01	1.4%	7.4E+00	0.7%	7.4E+00	0.4%	5.9E-02	0.8%	2.1E-01	0.6%	3.6E-01	0.5%
Total Eggs	1.4E+01	2.0%	1.2E+01	1.2%	1.2E+01	0.7%	1.4E-01	1.9%	4.5E-01	1.4%	5.5E-01	0.8%
Total Grains	1.9E+02	26.3%	2.1E+02	20.9%	2.9E+02	16.3%	2.0E+00	27.0%	7.0E+00	21.3%	1.1E+01	16.4%
Total Vegetables	1.7E+02	22.8%	1.5E+02	14.9%	1.9E+02	10.9%	1.9E+00	25.3%	4.8E+00	14.6%	7.7E+00	11.8%
Total Fruits	1.6E+02	22.4%	1.4E+02	14.2%	2.2E+02	12.7%	1.8E+00	24.2%	5.3E+00	16.0%	7.2E+00	11.0%
Total Fats[a]	1.1E+01	1.5%	1.1E+01	1.0%	1.3E+01	0.7%	1.2E-01	1.6%	3.2E-01	1.0%	4.7E-01	0.7%
	Ages 12-19 Years (g/day, as consumed)						Ages 12-19 Years (g/kg/day, as consumed)					

Table 3-26. Per Capita Intake of Total Foods and Major Food Groups, and Percent of Total Food Intake for Individuals with Low-end, Mid-range, and High-end Total Dairy Intake (continued)

Food Group	Low-end consumers		Mid-range consumers		High-end consumers		Low-end consumers		Mid-range consumers		High-end consumers	
	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent	Intake	Percent
Total Foods	6.9E+02	100.0%	1.1E+03	100.0%	2.1E+03	100.0%	8.9E+00	100.0%	1.8E+01	100.0%	3.8E+01	100.0%
Total Dairy	1.3E+01	2.0%	2.7E+02	23.9%	1.1E+03	51.6%	1.4E-01	1.6%	4.4E+00	24.5%	1.9E+01	50.9%
Total Meats	1.2E+02	17.0%	1.6E+02	13.9%	1.4E+02	6.9%	1.5E+00	17.3%	2.1E+00	11.7%	2.4E+00	6.5%
Total Fish	1.1E+01	1.6%	1.0E+01	0.9%	1.1E+01	0.6%	1.5E-01	1.7%	1.2E-01	0.7%	2.3E-01	0.6%
Total Eggs	1.4E+01	2.1%	1.7E+01	1.5%	2.0E+01	1.0%	2.2E-01	2.4%	3.0E-01	1.7%	3.1E-01	0.8%
Total Grains	2.0E+02	28.4%	2.6E+02	22.8%	3.4E+02	16.4%	2.4E+00	26.7%	4.5E+00	25.2%	6.5E+00	17.2%
Total Vegetables	1.8E+02	26.8%	2.5E+02	22.0%	2.8E+02	13.7%	2.4E+00	26.6%	3.7E+00	20.5%	4.9E+00	13.0%
Total Fruits	1.4E+02	20.8%	1.6E+02	13.8%	1.8E+02	8.9%	2.0E+00	22.3%	2.6E+00	14.5%	3.8E+00	10.0%
Total Fats[a]	9.7E+00	1.4%	1.3E+01	1.2%	2.0E+01	1.0%	1.2E-01	1.4%	2.2E-01	1.2%	3.4E-01	0.9%

a Includes added fats such as butter, margarine, dressings and sauces, vegetable oil, etc.; does not include fats eaten as components of other foods such as meats.

Source: Based on U.S. EPA analysis of 1994-96 CSFII.

Table 3-27. Weighted and Unweighted Number of Observations (Individuals) for NFCS Data Used in Analysis of Food Intake

	All Regions		Northeast		Midwest		South		West	
	wgtd	unwgtd	wgtd	unwgtd	wgtd	unwgtd	wgtd	unwgtd	wgtd	unwgtd
Age (years)										
< 01	2814000	156	545000	29	812000	44	889000	51	568000	32
01-02	5699000	321	1070000	56	1757000	101	1792000	105	1080000	59
03-05	8103000	461	1490000	92	2251000	133	2543000	140	1789000	95
06-11	16711000	937	3589000	185	4263000	263	5217000	284	3612000	204
12-19	20488000	1084	4445000	210	5490000	310	6720000	369	3833000	195

Table 3-28. Consumer Only Intake of Homegrown Foods (g/kg-day)[a] - All Regions Combined

Age (years)	Nc wgtd	Nc unwgtd	% Consuming	Mean	SE	P1	P5	P10	P25	P50	P75	P90	P95	P99	P100
Homegrown Fruits															
01-02	360000	23	6.32	8.74E+00	3.10E+00	9.59E-01	1.09E+00	1.30E+00	1.64E+00	3.48E+00	7.98E+00	1.93E+01	6.06E+01	6.06E+01	6.06E+01
03-05	550000	34	6.79	4.07E+00	1.48E+00	1.00E-02	1.00E-02	3.62E-01	9.77E-01	1.92E+00	2.73E+00	6.02E+00	8.91E+00	4.83E+01	4.83E+01
06-11	1044000	75	6.25	3.59E+00	6.76E-01	1.00E-02	1.91E-01	4.02E-01	6.97E-01	1.31E+00	3.08E+00	1.18E+01	1.58E+01	3.22E+01	3.22E+01
12-19	1189000	67	5.80	1.94E+00	3.66E-01	8.74E-02	1.27E-01	2.67E-01	4.41E-01	6.61E-01	2.35E+00	6.76E+00	8.34E+00	1.85E+01	1.85E+01
Homegrown Vegetables															
01-02	951000	53	16.69	5.20E+00	8.47E-01	2.32E-02	2.45E-01	3.82E-01	1.23E+00	3.27E+00	5.83E+00	1.31E+01	1.96E+01	2.70E+01	2.70E+01
03-05	1235000	76	15.24	2.46E+00	2.79E-01	0.00E+00	4.94E-02	3.94E-01	7.13E-01	1.25E+00	3.91E+00	6.35E+00	7.74E+00	1.06E+01	1.28E+01
06-11	3024000	171	18.10	2.02E+00	2.54E-01	5.95E-03	1.00E-01	1.60E-01	4.00E-01	8.86E-01	2.21E+00	4.64E+00	6.16E+00	1.76E+01	2.36E+01
12-19	3293000	183	16.07	1.48E+00	1.35E-01	0.00E+00	6.46E-02	1.45E-01	3.22E-01	8.09E-01	1.83E+00	3.71E+00	6.03E+00	7.71E+00	9.04E+00
Home Produced Meats															
01-02	276000	22	4.84	3.65E+00	6.10E-01	3.85E-01	9.49E-01	9.49E-01	1.19E+00	2.66E+00	4.72E+00	8.68E+00	1.00E+01	1.15E+01	1.15E+01
03-05	396000	26	4.89	3.61E+00	5.09E-01	8.01E-01	8.01E-01	1.51E+00	2.17E+00	2.82E+00	3.72E+00	7.84E+00	9.13E+00	1.30E+01	1.30E+01
06-11	1064000	65	6.37	3.65E+00	4.51E-01	3.72E-01	6.52E-01	7.21E-01	1.28E+00	2.09E+00	4.71E+00	8.00E+00	1.40E+01	1.53E+01	1.53E+01
12-19	1272000	78	6.21	1.70E+00	1.68E-01	1.90E-01	3.20E-01	4.70E-01	6.23E-01	1.23E+00	2.35E+00	3.66E+00	4.34E+00	6.78E+00	7.51E+00
Home Caught Fish															
01-02	82000	6	1.44	*	*	*	*	*	*	*	*	*	*	*	*
03-05	142000	11	1.75	*	*	*	*	*	*	*	*	*	*	*	*
06-11	382000	29	2.29	2.78E+00	8.40E-01	1.60E-01	1.60E-01	1.84E-01	2.28E-01	5.47E-01	1.03E+00	3.67E+00	7.05E+00	7.85E+00	2.53E+01
12-19	346000	21	1.69	1.52E+00	4.07E-01	1.95E-01	1.95E-01	1.95E-01	1.95E-01	3.11E-01	9.84E-01	1.79E+00	4.68E+00	6.67E+00	8.44E+00

NOTE: SE = standard error
P = percentile of the distribution
Nc wgtd = weighted number of consumers; Nc unwgtd = unweighted number of consumers in survey.
* = Less than 20 observations
[a] Data are not provided for intake of Home Produced Dairy because intake data were not provided for subpopulations for which there were less than 20 observations.
Source: Based on EPA's analyses of the 1987/88 NFCS

Table 3-29. Percent Weight Losses from Food Preparation

	Mean Net Cooking Loss (%)	Mean Net Post Cooking, Paring, or Preparation Loss (%)
Meat	30	30
Fish	32	11
Fruits	31	25
Vegetables	12	22[a]

[a] Based on potatoes only.

Source: U.S. EPA, 1997. (Derived from USDA, 1975.)

Table 3-30. Quantity (as consumed) of Food Groups Consumed Per Eating Occasion and the Percentage of Individuals Using These Foods in Three Days

	Quantity consumed per eating occasion (g)																							
	Under 1 year			1-2 years			3-5 years			6-8 years			9-14 years						15-18 years					
	Male and Female			Male and Female			Male and Female			Male and Female			Male			Female			Male			Female		
Food category	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD
Fruits and Vegetables																								
Raw vegetables																								
White potatoes	18.1	72	58	74.5	70	56	76.3	86	62	80.7	100	69	81.8	124	87	77.0	112	80	81.2	149	112	77.2	116	86
Cabbage and coleslaw	0	0	0	3.4	33	22	4.9	41	31	8.5	51	31	9.6	60	34	9.3	61	40	9.8	77	51	9.5	66	41
Carrots	0.8	37	12	3.4	28	25	5.4	38	33	9.8	38	41	8.6	39	36	6.5	33	31	4.5	42	39	5.5	39	35
Cucumbers	0.6	63	63	1.6	40	36	3.5	58	50	4.1	68	73	3.2	75	58	4.6	72	82	3.9	76	64	6.3	62	64
Lettuce and tossed salad	0	0	0	16.6	30	29	30.4	34	26	42.8	43	33	45.8	54	47	47.5	51	43	47.7	61	56	49.0	57	49
Mature onions	0	0	0	1.4	22	18	3.1	19	30	3.9	20	19	6.0	27	20	5.3	26	27	9.9	29	29	7.9	25	26
Tomatoes	0.3	21	7	10.6	46	32	15.7	52	44	18.3	55	33	20.1	74	58	21.0	71	49	24.4	75	56	24.3	66	44
Cooked vegetables																								
Broccoli	1.0	42	27	5.7	55	33	3.8	65	43	5.6	83	50	4.6	96	72	5.1	88	55	4.3	100	48	4.1	106	55
Cabbage	0.4	77	52	3.2	57	48	3.3	77	51	3.8	92	54	3.9	117	79	4.5	121	91	4.5	129	65	4.3	119	81
Carrots	21.7	71	41	11.7	54	38	8.0	49	31	8.7	59	33	8.5	79	48	8.8	75	46	8.5	86	48	7.0	71	46
Corn, whole kernel	3.2	22	17	25.8	56	40	30.1	68	45	34.6	78	41	32.0	95	62	31.0	83	47	28.8	116	70	24.5	94	59
Lima beans	1.0	71	67	2.4	54	38	1.9	49	31	1.9	79	47	1.8	114	133	2.3	86	45	2.6	141	94	1.8	91	78
Mixed vegetables	11.4	81	47	3.7	89	78	3.1	69	40	4.0	82	44	3.7	116	75	3.4	101	50	2.7	107	60	1.8	124	80
Cowpeas, field peas, black-eyed peas	0.5	127	64	2.1	63	50	2.5	84	60	2.7	97	57	2.7	109	60	2.3	96	67	3.2	151	63	2.4	163	100
Green peas	16.0	61	45	21.8	53	36	20.9	61	42	22.1	72	46	20.9	86	52	19.4	83	46	18.1	112	73	16.9	96	62
Spinach	0.9	26	19	2.8	58	48	3.2	73	53	5.1	93	56	5.2	105	59	3.6	102	62	4.5	127	80	3.0	108	64
String beans	19.7	69	47	25.1	48	33	25.4	51	46	31.6	64	38	31.1	75	54	29.4	74	55	29.5	93	58	24.8	83	51
Summer squash	0.7	26	19	1.3	96	63	1.4	97	91	1.1	136	121	1.2	103	50	1.7	102	56	2.1	155	76	1.2	121	78
Sweet potatoes	10.8	82	47	3.8	97	70	3.1	96	50	3.2	99	62	3.4	144	79	2.1	134	92	3.2	150	75	3.3	166	84
Tomato juice	0	0	0	0.8	147	73	0.9	156	61	0.9	133	48	1.2	159	63	1.0	183	95	2.1	191	94	2.2	194	84
Cucumber pickles	0.2	6	0	4.6	32	26	6.2	38	36	8.1	45	46	8.6	47	50	9.1	50	59	9.9	45	46	8.5	58	71
Fruits																								
Grapefruit	0	0	0	1.1	145	57	1.0	149	56	1.5	158	64	1.6	160	56	2.4	153	50	2.2	150	68	2.3	159	57
Grapefruit juice	0.6	143	44	1.0	156	66	1.2	174	47	1.6	184	52	1.3	194	73	1.5	173	72	1.7	248	202	2.2	210	66
Oranges	0.9	87	34	8.1	117	45	10.0	134	44	12.6	134	46	10.7	150	51	11.2	137	49	8.9	158	84	9.4	142	51
Orange juice	20.9	122	51	40.9	153	70	41.7	167	73	43.7	178	68	39.4	195	80	41.0	188	77	37.3	228	116	36.6	208	81
Apples	1.7	94	51	23.6	105	44	23.8	124	39	25.8	132	41	22.0	146	55	24.5	140	41	16.7	151	48	19.1	142	46
Applesauce, cooked apples	35.6	71	49	13.6	104	65	10.4	126	61	14.1	132	76	13.6	151	107	11.1	134	82	10.2	171	125	7.7	146	73
Apple juice	19.2	125	56	13.1	148	64	8.5	170	65	5.5	193	87	3.0	190	69	4.0	204	74	2.7	259	180	3.1	236	139
Cantaloupe	0.2	136	0	1.1	68	35	1.5	125	73	2.2	135	76	2.2	165	85	2.5	152	77	2.0	209	111	2.5	189	113
Raw peaches	1.2	118	39	3.5	129	48	3.8	128	36	4.5	145	68	3.5	170	77	4.9	153	68	4.0	205	111	3.3	142	66
Raw pears	1.2	56	40	2.3	131	43	2.9	150	57	4.0	163	42	2.7	163	46	3.3	161	42	3.2	195	219	1.4	167	57
Raw strawberries	0.2	120	30	1.5	87	41	1.2	69	34	1.6	87	44	1.2	95	53	2.2	91	50	1.6	121	63	1.9	82	45

Table 3-30. Quantity (as consumed) of Food Groups Consumed Per Eating Occasion and the Percentage of Individuals Using These Foods in Three Days (continued)

	Quantity consumed per eating occasion (g)																							
	Under 1 year			1-2 years			3-5 years			6-8 years			9-14 years						15-18 years					
	Male and Female			Male and Female			Male and Female			Male and Female			Male			Female			Male			Female		
Food category	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD	PC	Ave.	SD
Grain Products																								
Yeast Breads	17.6	20	11	88.0	28	16	95.1	36	17	97.2	40	19	96.9	49	28	96.4	44	23	96.2	59	35	93.7	44	21
Pancakes	3.0	39	27	12.2	59	50	12.7	76	52	11.9	96	59	13.5	118	72	10.7	101	89	9.8	161	110	9.8	121	93
Waffles	0.6	30	13	3.4	56	45	5.7	69	41	5.9	69	45	5.2	87	62	4.1	80	68	3.5	125	70	2.4	79	55
Tortillas	0.8	16	7	3.9	26	11	5.1	36	16	4.7	55	29	4.0	74	31	4.3	66	33	3.4	100	48	4.0	69	33
Cakes and Cupcakes	1.6	53	37	17.4	51	38	25.3	61	45	34.4	66	42	36.4	80	56	35.2	77	55	31.0	93	71	26.5	80	59
Cookies	11.9	15	13	46.3	21	15	48.1	25	22	53.2	28	21	44.4	36	36	43.1	32	29	37.9	45	50	34.9	31	26
Pies	0.5	53	30	4.7	88	50	7.1	106	48	8.1	116	58	10.2	133	55	10.6	129	62	13.6	144	66	9.2	126	47
Doughnuts	0.8	36	22	6.6	47	26	8.6	54	28	10.9	60	30	12.0	67	39	12.9	62	36	13.2	91	74	12.9	63	34
Crackers	13.8	10	9	38.1	14	14	32.8	18	20	26.2	20	19	22.1	24	24	22.1	20	16	18.0	32	29	19.6	23	21
Popcorn	0.1	72	0	5.7	9	12	8.5	12	11	9.5	14	9	9.6	18	17	9.1	17	15	6.1	20	20	7.8	18	20
Pretzels	0.7	4	4	3.2	18	18	3.1	21	20	3.3	25	21	4.1	29	25	3.5	30	26	2.9	52	50	3.1	25	16
Corn-based Salty Snacks	0.6	8	2	6.6	24	20	8.6	27	22	10.3	29	26	9.9	33	29	11.3	32	30	8.3	46	44	10.7	34	22
Pasta	3.4	58	42	14.1	82	59	14.7	99	58	14.5	116	74	14.0	162	102	14.5	145	89	11.2	198	133	10.8	158	99
Rice	4.3	53	42	20.9	81	50	22.2	95	58	23.4	120	77	18.9	149	86	22.4	138	77	20.9	195	117	19.0	160	89
Cooked Cereals	16.3	116	82	33.1	149	87	26.0	177	97	21.3	198	104	19.5	223	126	17.3	212	107	14.3	259	132	12.1	229	106
Ready-to-Eat Cereals	68.7	13	11	68.0	23	14	75.8	29	17	76.8	33	19	69.8	41	28	64.0	36	21	50.4	49	31	43.7	37	22
Meat, Poultry, and Dairy Products																								
Meat[a]	23.2	58	42	78.2	53	40	82.8	66	46	84.6	82	55	87.1	103	71	84.2	94	69	87.9	123	90	82.6	102	73
Beef	15.6	56	41	60.1	64	38	65.5	79	43	67.2	97	52	69.0	124	66	68.2	111	70	70.3	152	87	65.9	123	73
Pork	10.1	66	44	44.2	37	36	46.0	47	44	46.7	57	49	48.8	68	65	47.0	64	57	56.1	79	75	46.2	68	60
Lamb	2.6	52	29	1.4	72	46	0.6	90	59	0.5	139	86	0.9	171	80	0.7	127	68	0.5	156	81	1.0	112	43
Veal	3.2	54	37	1.2	80	28	1.6	75	33	2.0	115	72	1.5	124	75	1.5	96	46	1.5	170	87	2.1	131	62
Poultry	18.2	60	38	42.2	73	44	42.6	90	50	45.1	103	56	44.3	131	75	44.0	112	58	43.8	153	85	43.7	123	68
Chicken	15.6	62	39	38.8	73	43	39.3	92	50	41.4	106	55	39.8	136	77	39.6	115	57	38.9	160	87	39.5	128	70
Turkey	5.1	53	34	4.4	73	59	4.5	74	39	5.7	74	44	6.5	103	56	6.2	90	54	7.5	120	68	6.2	89	47
Dairy Products																								
Eggs	17.7	49	30	61.3	59	27	55.2	66	34	48.5	70	37	49.1	85	47	44.3	75	40	52.3	101	49	44.4	79	41
Butter	5.2	6	4	29.2	7	6	28.7	9	10	31.7	10	11	32.4	12	15	30.9	10	9	32.4	14	12	32.0	13	14
Margarine	8.5	5	4	43.8	6	6	46.1	8	8	42.9	9	8	44.8	12	12	40.7	11	12	41.4	16	14	38.6	11	9
Milk[b]	89.0	170	71	96.9	179	80	97.0	198	83	98.5	227	89	97.4	265	125	95.1	242	103	93.2	314	164	88.0	244	113
Cheese[c]	6.1	25	21	35.9	31	19	37.0	31	17	35.3	35	23	31.2	39	22	34.9	35	23	39.0	46	30	39.8	37	23

[a] Meat - beef, pork, lamb, and veal.
[b] Milk - fluid milk, milk beverages, and milk-based infant formulas.
[c] Cheese - natural and processed cheese.

Source: Pao et al., 1982 (based on 1977-78 NFCS data).

Table 3-31. Mean Moisture Content of Selected Food Groups Expressed as Percentages of Edible Portions

Food	Moisture Content (Percent)		Comments
	Raw	Cooked	
Fruit			
Apples - dried	31.76	84.13*	sulfured; *without added sugar
Apples	83.93*	84.46**	*with skin; **without skin
Apples - juice		87.93	canned or bottled
Applesauce		88.35*	*unsweetened
Apricots	86.35	86.62*	*canned juice pack with skin
Apricots - dried	31.09	85.56*	sulfured; *without added sugar
Bananas	74.26		
Blackberries	85.64		
Blueberries	84.61	86.59*	*frozen unsweetened
Boysenberries	85.90		frozen unsweetened
Cantaloupes - unspecified	89.78		
Casabas	91.00		
Cherries - sweet	80.76	84.95*	*canned, juice pack
Crabapples	78.94		
Cranberries	86.54		
Cranberries - juice cocktail	85.00		bottled
Currants (red and white)	83.95		
Elderberries	79.80		
Grapefruit	90.89		
Grapefruit - juice	90.00	90.10*	*canned unsweetened
Grapefruit - unspecified	90.89		pink, red, white
Grapes - fresh	81.30		American type (slip skin)
Grapes - juice	84.12		canned or bottled
Grapes - raisins	15.42		seedless
Honeydew melons	89.66		
Kiwi fruit	83.05		
Kumquats	81.70		
Lemons - juice	90.73	92.46*	*canned or bottled
Lemons - peel	81.60		
Lemons - pulp	88.98		
Limes - juice	90.21	92.52*	*canned or bottled
Limes - unspecified	88.26		
Loganberries	84.61		
Mulberries	87.68		
Nectarines	86.28		
Oranges - unspecified	86.75		all varieties
Peaches	87.66	87.49*	*canned juice pack
Pears - dried	26.69	64.44*	sulfured; *without added sugar
Pears - fresh	83.81	86.47*	*canned juice pack
Pineapple	86.50	83.51*	*canned juice pack
Pineapple - juice		85.53	canned
Plums		85.20	
Quinces	83.80		
Raspberries	86.57		
Strawberries	91.57	89.97*	*frozen unsweetened
Tangerine - juice	88.90	87.00*	*canned sweetened
Tangerines	87.60	89.51*	*canned juice pack
Watermelon	91.51		
Vegetables			
Alfalfa sprouts	91.14		
Artichokes - globe & French	84.38	86.50	boiled, drained
Artichokes - Jerusalem	78.01		

Table 3-31. Mean Moisture Content of Selected Food Groups Expressed as Percentages of Edible Portions (continued)

Food	Moisture Content (Percent)		Comments
	Raw	Cooked	
Asparagus	92.25	92.04	boiled, drained
Bamboo shoots	91.00	95.92	boiled, drained
Beans - dry			
Beans - dry - blackeye peas (cowpeas)	66.80	71.80	boiled, drained
Beans - dry - hyacinth (mature seeds)	87.87	86.90	boiled, drained
Beans - dry - navy (pea)	79.15	76.02	boiled, drained
Beans - dry - pinto	81.30	93.39	boiled, drained
Beans - lima	70.24	67.17	boiled, drained
Beans - snap - Italian - green - yellow	90.27	89.22	boiled, drained
Beets	87.32	90.90	boiled, drained
Beets - tops (greens)	92.15	89.13	boiled, drained
Broccoli	90.69	90.20	boiled, drained
Brussel sprouts	86.00	87.32	boiled, drained
Cabbage - Chinese/celery, including bok choy	95.32	95.55	boiled, drained
Cabbage - red	91.55	93.60	boiled, drained
Cabbage - savoy	91.00	92.00	boiled, drained
Carrots	87.79	87.38	boiled, drained
Cassava (yucca blanca)	68.51		
Cauliflower	92.26	92.50	boiled, drained
Celeriac	88.00	92.30	boiled, drained
Celery	94.70	95.00	boiled, drained
Chili peppers	87.74	92.50*	*canned solids & liquid
Chives	92.00		
Cole slaw	81.50		
Collards	93.90	95.72	boiled, drained
Corn - sweet	75.96	69.57	boiled, drained
Cress - garden - field	89.40	92.50	boiled, drained
Cress - garden	89.40	92.50	boiled, drained
Cucumbers	96.05		
Dandelion - greens	85.60	89.80	boiled, drained
Eggplant	91.93	91.77	boiled, drained
Endive	93.79		
Garlic	58.58		
Kale	84.46	91.20	boiled, drained
Kohlrabi	91.00	90.30	boiled, drained
Lambsquarter	84.30	88.90	boiled, drained
Leeks	83.00	90.80	boiled, drained
Lentils - whole	67.34	68.70	stir-fried
Lettuce - iceberg	95.89		
Lettuce - romaine	94.91		
Mung beans (sprouts)	90.40	93.39	boiled, drained
Mushrooms	91.81	91.08	boiled, drained
Mustard greens	90.80	94.46	boiled, drained
Okra	89.58	89.91	boiled, drained
Onions	90.82	92.24	boiled, drained
Onions - dehydrated or dried	3.93		
Parsley	88.31		
Parsley roots	88.31		
Parsnips	79.53	77.72	boiled, drained
Peas (garden) - mature seeds - dry	88.89	88.91	boiled, drained
Peppers - sweet - garden	92.77	94.70	boiled, drained
Potatoes (white) - peeled	78.96	75.42	baked

Table 3-31. Mean Moisture Content of Selected Food Groups Expressed as Percentages of Edible Portions (continued)

Food	Moisture Content (Percent)		Comments
	Raw	Cooked	
Potatoes (white) - whole	83.29	71.20	baked
Pumpkin	91.60	93.69	boiled, drained
Radishes - roots	94.84		
Rhubarb	93.61	67.79	frozen, cooked with added sugar
Rutabagas - unspecified	89.66	90.10	boiled, drained
Salsify (oyster plant)	77.00	81.00	boiled, drained
Shallots	79.80		
Soybeans - sprouted seeds	69.05	79.45	steamed
Spinach	91.58	91.21	boiled, drained
Squash - summer	93.68	93.70	all varieties; boiled, drained
Squash - winter	88.71	89.01	all varieties; baked
Sweetpotatoes (including yams)	72.84	71.85	baked in skin
Swiss chard	92.66	92.65	boiled, drained
Tapioca - pearl	10.99		dry
Taro - greens	85.66	92.15	steamed
Taro - root	70.64	63.80	
Tomatoes - juice		93.90	canned
Tomatoes - paste		74.06	canned
Tomatoes - puree		87.26	canned
Tomatoes - raw	93.95		
Tomatoes - whole	93.95	92.40	boiled, drained
Towelgourd	93.85	84.29	boiled, drained
Turnips - roots	91.87	93.60	boiled, drained
Turnips - tops	91.07	93.20	boiled, drained
Water chestnuts	73.46		
Yambean - tuber	89.15	87.93	boiled, drained
Grains			
Barley - pearled	10.09	68.80	
Corn - grain - endosperm	10.37		
Corn - grain - bran	3.71		crude
Millet	3.71	71.41	
Oats	8.22		
Rice - rough - white	11.62	68.72	
Rye - rough	10.95		
Rye - flour - medium	9.85		
Sorghum (including milo)	9.20		
Wheat - rough - hard white	9.57		
Wheat - germ	11.12		crude
Wheat - bran	9.89		crude
Wheat - flour - whole grain	10.27		
Meat			
Beef	71.60		composite, trimmed, retail cuts
Beef liver	68.99		
Chicken (light meat)	74.86		without skin
Chicken (dark meat)	75.99		without skin
Duck - domestic	73.77		
Duck - wild	75.51		
Goose - domestic	68.30		
Ham - cured	66.92		
Horse	72.63	63.98	roasted
Lamb	73.42		composite, trimmed, retail cuts
Lard	0.00		
Pork	70.00		roasted
Rabbit - domestic	72.81	69.11	roasted
Turkey		74.16	roasted

Table 3-31. Mean Moisture Content of Selected Food Groups Expressed as Percentages of Edible Portions (continued)

Food	Moisture Content (Percent)		Comments
	Raw	Cooked	
Dairy Products			
Eggs	74.57		
Butter	15.87		
Cheese American pasteurized	39.16		regular
Cheddar	36.75		
Swiss	37.21		
Parmesan, hard	29.16		
Parmesan, grated	17.66		
Cream, whipping, heavy	57.71		
Cottage, lowfat	79.31		
Colby	38.20		
Blue	42.41		
Cream	53.75		
Yogurt			
Plain, lowfat	85.07		
Plain, with fat	87.90		made from whole milk
Human milk - estimated from USDA Survey			
Human	87.50		whole, mature, fluid
Skim	90.80		
Lowfat	90.80		1%

Source: USDA, 1979-1986.

Table 3-32. Percent Moisture Content for Selected Fish Species[a]

Species	Moisture Content (%)	Comments
	FINFISH	
Anchovy, European	73.37	Raw
	50.30	Canned in oil, drained solids
Bass	75.66	Freshwater, mixed species, raw
Bass, Striped	79.22	Raw
Bluefish	70.86	Raw
Butterfish	74.13	Raw
Carp	76.31	Raw
	69.63	Cooked, dry heat
Catfish	76.39	Channel, raw
	58.81	Channel, cooked, breaded and fried
Cod, Atlantic	81.22	Atlantic, raw
	75.61	Canned, solids and liquids
	75.92	Cooked, dry heat
	16.14	Dried and salted
Cod, Pacific	81.28	Raw
Croaker, Atlantic	78.03	Raw
	59.76	Cooked, breaded and fried
Dolphinfish, Mahimahi	77.55	Raw
Drum, Freshwater	77.33	Raw
Flatfish, Flounder and Sole	79.06	Raw
	73.16	Cooked, dry heat
Grouper	79.22	Raw, mixed species
	73.36	Cooked, dry heat
Haddock	79.92	Raw
	74.25	Cooked, dry heat
	71.48	Smoked
Halibut, Atlantic & Pacific	77.92	Raw
	71.69	Cooked, dry heat
Halibut, Greenland	70.27	Raw
Herring, Atlantic & Turbot, domestic species	72.05	Raw
	64.16	Cooked, dry heat
	59.70	Kippered
	55.22	Pickled
Herring, Pacific	71.52	Raw
Mackerel, Atlantic	63.55	Raw
	53.27	Cooked, dry heat
Mackerel, Jack	69.17	Canned, drained solids
Mackerel, King	75.85	Raw
Mackerel, Pacific & Jack	70.15	Canned, drained solids
Mackerel, Spanish	71.67	Raw
	68.46	Cooked, dry heat
Monkfish	83.24	Raw
Mullet, Striped	77.01	Raw
	70.52	Cooked, dry heat
Ocean Perch, Atlantic	78.70	Raw
	72.69	Cooked, dry heat
Perch, Mixed species	79.13	Raw
	73.25	Cooked, dry heat
Pike, Northern	78.92	Raw
	72.97	Cooked, dry heat
Pike, Walleye	79.31	Raw

Table 3-32. Percent Moisture Content for Selected Fish Species[a] (continued)

Species	Moisture Content (%)	Comments
Pollock, Alaska & Walleye	81.56	Raw
	74.06	Cooked, dry heat
Pollock, Atlantic	78.18	Raw
Rockfish, Pacific, mixed species	79.26	Raw (Mixed species)
	73.41	Cooked, dry heat (mixed species)
Roughy, Orange	75.90	Raw
Salmon, Atlantic	68.50	Raw
Salmon, Chinook	73.17	Raw
	72.00	Smoked
Salmon, Chum	75.38	Raw
	70.77	Canned, drained solids with bone
Salmon, Coho	72.63	Raw
	65.35	Cooked, moist heat
Salmon, Pink	76.35	Raw
	68.81	Canned, solids with bone and liquid
Salmon, Red & Sockeye	70.24	Raw
	68.72	Canned, drained solids with bone
	61.84	Cooked, dry heat
Sardine, Atlantic	59.61	Canned in oil, drained solids with bone
Sardine, Pacific	68.30	Canned in tomato sauce, drained solids with bone
Sea Bass, mixed species	78.27	Cooked, dry heat
	72.14	Raw
Seatrout, mixed species	78.09	Raw
Shad, American	68.19	Raw
Shark, mixed species	73.58	Raw
	60.09	Cooked, batter-dipped and fried
Snapper, mixed species	76.87	Raw
	70.35	Cooked, dry heat
Sole, Spot	75.95	Raw
Sturgeon, mixed species	76.55	Raw
	69.94	Cooked, dry heat
	62.50	Smoked
Sucker, white	79.71	Raw
Sunfish, Pumpkinseed	79.50	Raw
Swordfish	75.62	Raw
	68.75	Cooked, dry heat
Trout, mixed species	71.42	Raw
Trout, Rainbow	71.48	Raw
	63.43	Cooked, dry heat
Tuna, light meat	59.83	Canned in oil, drained solids
	74.51	Canned in water, drained solids
Tuna, white meat	64.02	Canned in oil
	69.48	Canned in water, drained solids
Tuna, Bluefish, fresh	68.09	Raw
	59.09	Cooked, dry heat
Turbot, European	76.95	Raw
Whitefish, mixed species	72.77	Raw
	70.83	Smoked
Whiting, mixed species	80.27	Raw
	74.71	Cooked, dry heat
Yellowtail, mixed species	74.52	Raw

Table 3-32. Percent Moisture Content for Selected Fish Species[a] (continued)

Species	Moisture Content (%)	Comments
	SHELLFISH	
Crab, Alaska King	79.57	Raw
	77.55	Cooked, moist heat
		Imitation, made from surimi
Crab, Blue	79.02	Raw
	79.16	Canned (dry pack or drained solids of wet pack)
	77.43	Cooked, moist heat
	71.00	Crab cakes
Crab, Dungeness	79.18	Raw
Crab, Queen	80.58	Raw
Crayfish, mixed species	80.79	Raw
	75.37	Cooked, moist heat
Lobster, Northern	76.76	Raw
	76.03	Cooked, moist heat
Shrimp, mixed species	75.86	Raw
	72.56	Canned (dry pack or drained solids of wet pack)
	52.86	Cooked, breaded and fried
	77.28	Cooked, moist heat
Spiny Lobster, mixed species	74.07	Imitation made from surimi, raw
Clam, mixed species	81.82	Raw
	63.64	Canned, drained solids
	97.70	Canned, liquid
	61.55	Cooked, breaded and fried
	63.64	Cooked, moist heat
Mussel, Blue	80.58	Raw
	61.15	Cooked, moist heat
Octopus, common	80.25	Raw
Oyster, Eastern	85.14	Raw
	85.14	Canned (solids and liquid based) raw
	64.72	Cooked, breaded and fried
	70.28	Cooked, moist heat
Oyster, Pacific	82.06	Raw
Scallop, mixed species	78.57	Raw
	58.44	Cooked, breaded and fried
	73.82	Imitation, made from Surimi
Squid	78.55	Raw
	64.54	Cooked, fried

[a] Data are reported as in the Handbook

NA = Not available

Source: USDA, 1979-1984 - U.S. Agricultural Handbook No. 8

Table 3-33. Percentage Lipid Content (Expressed as Percentages of 100 Grams of Edible Portions) of Selected Meat, Dairy, and Fish Products[a]

Product	Fat Percentage	Comment
Meats		
Beef		
Lean only	6.16	Raw
Lean and fat, 1/4 in. fat trim	9.91	Cooked
Brisket (point half)	19.24	Raw
Lean and fat	21.54	Cooked
Brisket (flat half)		
Lean and fat	22.40	Raw
Lean only	4.03	Raw
Pork		
Lean only	5.88	Raw
	9.66	Cooked
Lean and fat	14.95	Raw
	17.18	Cooked
Cured shoulder, blade roll, lean and fat	20.02	Unheated
Cured ham, lean and fat	12.07	Center slice
Cured ham, lean only	7.57	Raw, center, country style
Sausage	38.24	Raw, fresh
Ham	4.55	Cooked, extra lean (5% fat)
Ham	9.55	Cooked, (11% fat)
Lamb		
Lean	5.25	Raw
	9.52	Cooked
Lean and fat	21.59	Raw
	20.94	Cooked
Veal		
Lean	2.87	Raw
	6.58	Cooked
Lean and fat	6.77	Raw
	11.39	Cooked
Rabbit		
Composite of cuts	5.55	Raw
	8.05	Cooked
Chicken		
Meat only	3.08	Raw
	7.41	Cooked
Meat and skin	15.06	Raw
	13.60	Cooked
Turkey		
Meat only	2.86	Raw
	4.97	Cooked
Meat and skin	8.02	Raw
	9.73	Cooked
Ground	6.66	Raw
Dairy		
Milk		
Whole	3.16	3.3% fat, raw or pasteurized
Human	4.17	Whole, mature, fluid
Lowfat (1%)	0.83	Fluid
Lowfat (2%)	1.83	Fluid
Skim	0.17	Fluid
Cream		
Half and half	18.32	Table or coffee, fluid
Medium	23.71	25% fat, fluid
Heavy-whipping	35.09	Fluid
Sour	19.88	Cultured

Table 3-33. Percentage Lipid Content (Expressed as Percentages of 100 Grams of Edible Portions) of Selected Meat, Dairy, and Fish Products[a] (continued)

Product	Fat Percentage	Comment
Butter	76.93	Regular
Cheese		
American	29.63	Pasteurized
Cheddar	31.42	
Swiss	26.02	
Cream	33.07	
Parmesan	24.50; 28.46	Hard; grated
Cottage	1.83	Lowfat, 2% fat
Colby	30.45	
Blue	27.26	
Provolone	25.24	
Mozzarella	20.48	
Yogurt	1.47	Plain, lowfat
Eggs	8.35	Chicken, whole raw, fresh or frozen
FINFISH		
Anchovy, European	4.101	Raw
	8.535	Canned in oil, drained solids
Bass	3.273	Freshwater, mixed species, raw
Bass, Striped	1.951	Raw
Bluefish	3.768	Raw
Butterfish	NA	Raw
Carp	4.842	Raw
	6.208	Cooked, dry heat
Catfish	3.597	Channel, raw
	12.224	Channel, cooked, breaded and fried
Cod, Atlantic	0.456	Atlantic, raw
	0.582	Canned, solids and liquids
	0.584	Cooked, dry heat
	1.608	Dried and salted
Cod, Pacific	0.407	Raw
Croaker, Atlantic	2.701	Raw
	11.713	Cooked, breaded and fried
Dolphinfish, Mahimahi	0.474	Raw
Drum, Freshwater	4.463	Raw
Flatfish, Flounder and Sole	0.845	Raw
	1.084	Cooked, dry heat
Grouper	0.756	Raw, mixed species
	0.970	Cooked, dry heat
Haddock	0.489	Raw
	0.627	Cooked, dry heat
	0.651	Smoked
Halibut, Atlantic & Pacific	1.812	Raw
	2.324	Cooked, dry heat
Halibut, Greenland	12.164	Raw
Herring, Atlantic & Turbot, domestic species	7.909	Raw
	10.140	Cooked, dry heat
	10.822	Kippered
	16.007	Pickled

Table 3-33. Percentage Lipid Content (Expressed as Percentages of 100 Grams of Edible Portions) of Selected Meat, Dairy, and Fish Products[a] (continued)

Product	Fat Percentage	Comment
Herring, Pacific	12.552	Raw
Mackerel, Atlantic	9.076	Raw
	15.482	Cooked, dry heat
Mackerel, Jack	4.587	Canned, drained solids
Mackerel, King	1.587	Raw
Mackerel, Pacific & Jack	6.816	Canned, drained solids
Mackerel, Spanish	5.097	Raw
	5.745	Cooked, dry heat
Monkfish	NA	Raw
Mullet, Striped	2.909	Raw
	3.730	Cooked, dry heat
Ocean Perch, Atlantic	1.296	Raw
	1.661	Cooked, dry heat
Perch, Mixed species	0.705	Raw
	0.904	Cooked, dry heat
Pike, Northern	0.477	Raw
	0.611	Cooked, dry heat
Pike, Walleye	0.990	Raw
Pollock, Alaska & Walleye	0.701	Raw
	0.929	Cooked, dry heat
Pollock, Atlantic	0.730	Raw
Rockfish, Pacific, mixed species	1.182	Raw (Mixed species)
	1.515	Cooked, dry heat (mixed species)
Roughy, Orange	3.630	Raw
Salmon, Atlantic	5.625	Raw
Salmon, Chinook	9.061	Raw
	3.947	Smoked
Salmon, Chum	3.279	Raw
	4.922	Canned, drained solids with bone
Salmon, Coho	4.908	Raw
	6.213	Cooked, moist heat
Salmon, Pink	2.845	Raw
	5.391	Canned, solids with bone and liquid
Salmon, Red & Sockeye	4.560	Raw
	6.697	Canned, drained solids with bone
	9.616	Cooked, dry heat
Sardine, Atlantic	10.545	Canned in oil, drained solids with bone
Sardine, Pacific	11.054	Canned in tomato sauce, drained solids with bone
Sea Bass, mixed species	1.678	Cooked, dry heat
	2.152	Raw
Seatrout, mixed species	2.618	Raw
Shad, American	NA	Raw
Shark, mixed species	3.941	Raw
	12.841	Cooked, batter-dipped and fried
Snapper, mixed species	0.995	Raw
	1.275	Cooked, dry heat
Sole, Spot	3.870	Raw
Sturgeon, mixed species	3.544	Raw
Sucker, white	4.544	Cooked, dry heat
Sunfish, Pumpkinseed	3.829	Smoked
Swordfish	1.965	Raw
	0.502	Raw
Trout, mixed species	3.564	Raw
Trout, Rainbow	4.569	Cooked, dry heat
	5.901	Raw
	2.883	Raw
	3.696	Cooked, dry heat

Table 3-33. Percentage Lipid Content (Expressed as Percentages of 100 Grams of Edible Portions) of Selected Meat, Dairy, and Fish Products[a] (continued)

Product	Fat Percentage	Comment
Tuna, light meat	7.368	Canned in oil, drained solids
	0.730	Canned in water, drained solids
Tuna, white meat	NA	Canned in oil
	2.220	Canned in water, drained solids
Tuna, Bluefish, fresh	4.296	Raw
	5.509	Cooked, dry heat
Turbot, European	NA	Raw
Whitefish, mixed species	5.051	Raw
	0.799	Smoked
Whiting, mixed species	0.948	Raw
	1.216	Cooked, dry heat
Yellowtail, mixed species	NA	Raw
SHELLFISH		
Crab, Alaska King	NA	Raw
	0.854	Cooked, moist heat
		Imitation, made from surimi
Crab, Blue	0.801	Raw
	0.910	Canned (dry pack or drained solids of wet pack)
	1.188	Cooked, moist heat
	6.571	Crab cakes
Crab, Dungeness	0.616	Raw
Crab, Queen	0.821	Raw
Crayfish, mixed species	0.732	Raw
	0.939	Cooked, moist heat
Lobster, Northern	NA	Raw
	0.358	Cooked, moist heat
Shrimp, mixed species	1.250	Raw
	1.421	Canned (dry pack or drained solids of wet pack)
	10.984	Cooked, breaded and fried
	0.926	Cooked, moist heat
Spiny Lobster, mixed species	1.102	Imitation made from surimi, raw
Clam, mixed species	0.456	Raw
	0.912	Canned, drained solids
	NA	Canned, liquid
	10.098	Cooked, breaded and fried
	0.912	Cooked, moist heat
Mussel, Blue	1.538	Raw
	3.076	Cooked, moist heat
Octopus, common	0.628	Raw
Oyster, Eastern	1.620	Raw
	1.620	Canned (solids and liquid based) raw
	11.212	Cooked, breaded and fried
	3.240	Cooked, moist heat
Oyster, Pacific	1.752	Raw
Scallop, mixed species	0.377	Raw
	10.023	Cooked, breaded and fried
	NA	Imitation, made from Surimi
Squid	0.989	Raw
	6.763	Cooked, fried

NA = Not available

[a] Based on the lipid content in 100 grams, edible portion. Total Fat Content - saturated, monosaturated and polyunsaturated.
Source: USDA, 1979-1984.

Table 3-34. Fat Content of Meat Products

Meat Product 3-oz cooked serving (85.05 g)	Total Fat (g)	Percent Fat Content (%)
Beef, retail composite, lean only	8.4	9.9
Pork, retail composite, lean only	8.0	9.4
Lamb, retail composite, lean only	8.1	9.5
Veal, retail composite, lean only	5.6	6.6
Broiler chicken, flesh only	6.3	7.4
Turkey, flesh only	4.2	4.9

Source: National Livestock and Meat Board, 1993

Table 3-35. Summary of Recommended Values for Per Capita Intake of Foods, As Consumed

Age	Mean	95th Percentile	Multiple Percentiles	Study
Total Fruit Intake				
< 1 year	13.2 g/kg-day	41.2 g/kg-day	see Table 3-2	EPA Analysis of CSFII
1-2 years	19.3 g/kg-day	53.9 g/kg-day		1994-96 Data
3-5 years	11.0 g/kg-day	32.7 g/kg-day		
6-11 years	5.4 g/kg-day	18.0 g/kg-day		
12-19 years	2.8 g/kg-day	11.0 g/kg-day		
Total Vegetable Intake				
< 1 year	6.9 g/kg-day	24.2 g/kg-day	see Table 3-2	EPA Analysis of CSFII
1-2 years	9.5 g/kg-day	23.3 g/kg-day		1994-96 Data
3-5 years	7.3 g/kg-day	18.3 g/kg-day		
6-11 years	5.3 g/kg-day	13.5 g/kg-day		
12-19 years	4.0 g/kg-day	9.3 g/kg-day		
Total Grain Intake				
< 1 year	4.1 g/kg-day	20.2 g/kg-day	See Table 3-2	EPA Analysis of CSFII
1-2 years	11.2 g/kg-day	24.7 g/kg-day		1994-96 Data
3-5 years	10.3 g/kg-day	21.1 g/kg-day		
6-11 years	7.2 g/kg-day	15.6 g/kg-day		
12-19 years	4.4 g/kg-day	9.7 g/kg-day		
Total Meat Intake				
< 1 year	1.1 g/kg-day	5.9 g/kg-day	See Table 3-2	EPA Analysis of CSFII
1-2 years	4.4 g/kg-day	10.2 g/kg-day		1994-96 Data
3-5 years	4.1 g/kg-day	9.4 g/kg-day		
6-11 years	2.9 g/kg-day	6.8 g/kg-day		
12-19 years	2.2 g/kg-day	4.9 g/kg-day		
Total Dairy Intake				
< 1 year	111 g/kg-day	235 g/kg-day	See Table 3-2	EPA Analysis of CSFII
1-2 years	37.5 g/kg-day	90.2 g/kg-day		1994-96 Data
3-5 years	20.9 g/kg-day	48.8 g/kg-day		
6-11 years	13.9 g/kg-day	33.5 g/kg-day		
12-19 years	6.1 g/kg-day	17.8 g/kg-day		
Total Fish Intake				
< 1 year	0.11 g/kg-day	0.53 g/kg-day	See Table 3-2	EPA Analysis of CSFII
1-2 years	0.37 g/kg-day	1.79 g/kg-day		1994-96 Data
3-5 years	0.32 g/kg-day	1.74 g/kg-day		
6-11 years	0.26 g/kg-day	1.35 g/kg-day		
12-19 years	0.20 g/kg-day	1.10 g/kg-day		
Individual Foods Intake	see Table 3-3	---	---	EPA Analysis of CSFII 1994-96 Data

Table 3-35. Summary of Recommended Values for Per Capita Intake of Foods, As Consumed (continued)

Age	Mean	95th Percentile	Multiple Percentiles	Study
Freshwater Total Fish Intake (General Population)				
14 years and under	70.6 mg/kg-day	556 mg/kg-day	See Table 3-6	EPA Analysis of CSFII 1989-91 Data
Marine Fish Intake (General Population)				
14 years and under	163 mg/kg-day	894 mg/kg-day	See Table 3-6	EPA Analysis of CSFII 1989-91 Data
Recreational Fish Intake - Freshwater				
1-5 years	370 mg/kg-day	—	See Table 3-13	EPA Analysis of West et al.1989 Data
6-10 years	280 mg/kg-day	—		
Native American Subsistence Fish Intake				
<5 years	11 g/kg-day	—	—	CRITFC, 1994
Total Fat Intake				
	See Table 3-15	See Table 3-15	See Table 3-15	Frank et al.,1996
Homeproduced Food Intake				
	See Table 3-28	See Table 3-28	See Table 3-28	EPA Analysis of 1987/88 NFCS

Table 3-36. Confidence Intake Recommendations for Various Foods, Including Fish (General Population)

Considerations	Rationale	Rating
Study Elements		
• Level of peer review	USDA CSFII survey receives high level of peer review. EPA analysis of these data has been peer reviewed outside the Agency.	High
• Accessibility	CSFII data are publicly available. Javitz (1980) is a contractor report to EPA (CSFII)	High Medium (Javitz)
• Reproducibility	Enough information is included to reproduce results.	High
• Focus on factor of interest	Analysis is specifically designed to address food intake.	High
• Data pertinent to U.S.	Data focuses on the U.S. population.	High
• Primary data	This is new analysis of primary data.	High
• Currency	Were the most current data publicly available at the time the analysis was conducted for the Handbook.	High
• Adequacy of data collection period	Survey is designed to collect short-term data.	Medium confidence for average values; Low confidence for long term percentile distribution
• Validity of approach	Survey methodology was adequate.	High
• Study size	Study size was very large and therefore adequate.	High
• Representativeness of the population	The population studied was the U.S. population.	High
• Characterization of variability	Survey was not designed to capture long term day-to-day variability. Short term distributions are provided.	Medium
• Lack of bias in study design (high rating is desirable)	Response rate was good.	High
• Measurement error	No measurements were taken. The study relied on survey data.	N/A
Other Elements		
• Number of studies	1 for most foods, 2 for fish; CSFII was the most recent data set publicly available at the time the analysis was conducted for the Handbook.	Low
• Agreement between researchers	Although the CSFII was the only study classified as key study for most foods, the results are in good agreement with earlier data.	High
Overall Rating	The survey is representative of U.S. population. Although there was only one study considered key, these data are the most recent and are in agreement with earlier data. The approach used to analyzed the data was adequate. However, due to the limitations of the survey design estimation of long-term percentile values (especially the upper percentiles) is uncertain.	**High** confidence in the average; **Low** confidence in the long-term upper percentiles

Table 3-37. Confidence Intake Recommendations for Fish Consumption - Recreational Freshwater Angler Population

Considerations	Rationale	Rating
Study Elements		
• Level of peer review	Study is in a technical report and has been reviewed by the EPA.	High
• Accessibility	The original study analyses are reported in a technical report. Subsequent EPA analyses are detailed in this Handbook.	High
• Reproducibility	Enough information is available to reproduce results.	High
• Focus on factor of interest	Study focused on ingestion of fish by the recreational freshwater angler and family.	High
• Data pertinent to U.S.	The study was conducted in the U.S.	High
• Primary data	Data are from a primary reference.	High
• Currency	The study was conducted between January and May 1989.	High
• Adequacy of data collection period	Data were collected for 1 week.	Low
• Validity of approach	Data presented are from a one week recall of fish consumption study. Weight of fish consumed was estimated using approximate weight of fish catch and edible fraction or approximate weight of fish meal.	Medium
• Study size	Study population was 621 children.	Medium
• Representativeness of the population	The study was localized to a single state.	Low
• Characterization of variability	Distributions were not generated.	High
• Lack of bias in study design (high rating is desirable)	Response rate was 47 percent.	Medium
• Measurement error	Weight of fish portions were estimated in one study, fish weight was estimated from reported fish length in another study.	Medium
Other Elements		
• Number of studies	There is 1 study.	Low
• Agreement between researchers	There is only 1 study. EPA performed an analyses using these data.	Low
Overall Rating	The study is not nationally representative and not representative of long-term consumption.	**Low**

Table 3-38. Confidence Intake Recommendations for Fish Consumption - Native American Subsistence Population

Considerations	Rationale	Rating
Study Elements		
• Level of peer review	Study is in a technical report.	Medium
• Accessibility	CRITFC is a technical report, that is publicly available	Medium
• Reproducibility	The study was adequately detailed and enough information is available to reproduce results.	High
• Focus on factor of interest	Study focused on fish ingestion among Native American Tribes.	High
• Data pertinent to U.S.	The study was specific in the U.S.	High
• Primary data	The study used primary data.	High
• Currency	Data were from 1991-1992.	High
• Adequacy of data collection period	Data were collected for 1 study.	High Low confidence for long term percentile distribution
• Validity of approach	Individual intake measured directly, but some respondents provided in same information for the children as themselves.	Low
• Study size	The sample population was 204 children < 5 years old.	Medium
• Representativeness of the population	Only one state was represented; population < 5 years old only.	Low
• Characterization of variability	Individual variations were not described.	Medium
• Lack of bias in study design (high rating is desirable)	The response rate was 69 percent in the study..	Medium
• Measurement error	The weight of the fish was estimated.	Medium
Other Elements		
• Number of studies	There was only one study.	Low - Medium
• Agreement between researchers	There was only one study.	Medium
Overall Rating	Study is not nationally representative.	**Low**

APPENDIX 3A

CALCULATIONS USED IN THE 1994-96 CSFII ANALYSIS TO CORRECT FOR MIXTURES

APPENDIX 3A
Calculations Used in the 1994-96 CSFII Analysis to Correct for Mixtures

Distributions of intake for various food groups were generated for the food/items groups using the USDA 1994-96 CSFII data set as described in Sections 9.2.2. and 11.1.2. However, several of the food categories used did not include meats, dairy products, and vegetables that were eaten as mixtures with other foods. Thus, adjusted intake rates were calculated for food items that were identified by USDA (1995) as comprising a significant portion of grain and meat mixtures. To account for the amount of these foods consumed as mixtures, the mean fractions of total meat or grain mixtures represented by these food items were calculated (Table 3A-1) using Appendix C of USDA (1995). Mean values for all individuals were used to calculate these fractions. These fractions were multiplied by each individual's intake rate for total meat mixtures or grain mixtures to calculate the amount of the individual's food mixture intake that can be categorized into one of the selected food groups. These amounts were then added to the total intakes rates for meats, grains, total vegetables, tomatoes, and white potatoes to calculate an individual's total intake of these food groups, as shown in the example for meats below.

$$IR_{meat-adjusted} = (IR_{gr\ mixtures} * Fr_{meat/gr}) + (IR_{mt\ mixtures} * Fr_{meat/mt}) + (IR_{meat})$$

where:

$IR_{meat\text{-}adjusted}$	=	adjusted individual intake rate for total meat;
$IR_{gr\ mixtures}$	=	individual intake rate for grain mixtures;
$IR_{mt\ mixtures}$	=	individual intake rate for meat mixtures;
IR_{meat}	=	individual intake rate for meats;
$Fr_{meat/gr}$	=	fraction of grain mixture that is meat; and
$Fr_{meat/mt}$	=	fraction of meat mixture that is meat.

Population distributions for mixture-adjusted intakes were based on adjusted intake rates for the population of interest.

TABLE 3A-1. FRACTION OF GRAIN AND MEAT MIXTURE INTAKE REPRESENTED BY VARIOUS FOOD ITEMS/GROUPS

Grain Mixtures	
total vegetables	0.2584
tomatoes	0.1685
white potatoes	0.0000
total meats	0.0787
beef	0.0449
pork	0.0112
poultry	0.0112
dairy	0.1348
total grains	0.3146
fish	0.0000
eggs	0.0112
fat	0.0225
Meat Mixtures	
total vegetables	0.3000
tomatoes	0.1111
white potatoes	0.0333
total meats	0.3111
beef	0.2000
pork	0.0222
poultry	0.0778
dairy	0.0556
total grains	0.1333
fish	0.0444
eggs	0.0111
fats	0.0222

APPENDIX 3B

FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA

TABLE 3B-1 FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA

Food Product	Food Codes		
MAJOR FOOD GROUPS			
Total Dairy	1-	Milk and Milk Products milk and milk drinks cream and cream substitutes milk desserts, sauces, and gravies cheeses	Includes regular fluid milk, human milk, imitation milk products, yogurt, milk-based meal replacements, and infant formulas. Also includes the average portion of grain mixtures (i.e., 13.48 percent) and the average portion of meat mixtures (i.e., 5.56 percent) made up by dairy.
Total Meats	20- 21- 22- 23- 24- 25-	Meat, type not specified Beef Pork Lamb, veal, game, carcass meat Poultry Organ meats, sausages, lunchmeats, meat spreads	Also includes the average portion of grain mixtures (i.e., 7.87 percent) and the average portion of meat mixtures (i.e., 31.11 percent) made up by meats.
Total Fish	26-	Fish, all types	Also includes the average portion of meat mixtures (i.e., 4.44 percent) made up by fish.
Eggs	3-	Eggs eggs egg mixtures egg substitutes eggs baby food froz. meals with egg as main ingred.	Includes baby foods. Also includes the average portion of grain mixtures (i.e., 1.12 percent) and the average portion of meat mixtures (i.e., 1.11 percent) made up by eggs.
Total Grains	50- 51- 52- 53- 54- 55- 561- 562- 57-	flour breads tortillas sweets snacks breakfast foods pasta cooked cereals and rice ready-to-eat and baby cereals	Also includes the average portion of grain mixtures (i.e., 31.46 percent) and the average portion of meat mixtures (i.e., 13.33 percent) made up by grain.
Total Fruits	6-	Fruits citrus fruits and juices dried fruits other fruits fruits/juices & nectar fruit/juices baby food	Includes baby foods.
Total Vegetables	7- 411- 412- 413- 414- 415- 416- 418- 419-	Vegetables (all forms) white potatoes & PR starchy dark green vegetables deep yellow vegetables tomatoes and tom. mixtures other vegetables veg. and mixtures/baby food veg. with meat mixtures Beans/legumes Beans/legumes Beans/legumes Soybeans Bean dinners and soups Bean dinners and soups Meatless items Soyburgers	Includes baby foods; mixtures, mostly vegetables; does not include nuts and seeds. Also includes the average portion of grain mixtures (i.e., 25.84 percent) and the average portion of meat mixtures (i.e., 30.00 percent) made up by vegetables.
Total Fats	8-	Fats (all forms)	Includes butter, margarine, animal fat, sauces, vegetable oils, dressings, and mayonnaise. Also includes the average portion of grain mixtures (i.e., 2.25 percent) and the average portion of meat mixtures (i.e., 2.22 percent) made up by meats.

TABLE 3B-1 FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA (CONTINUED)

Food Product	Food Codes		
INDIVIDUAL MEATS			
Beef	21-	Beef beef, nfs beef steak beef oxtails, neckbones, ribs roasts, stew meat, corned, brisket, sandwich steaks ground beef, patties, meatballs other beef items beef baby food	Also includes the average portion of grain mixtures (i.e., 4.49 percent) and the average portion of meat mixtures (i.e., 20.0 percent) made up by beef.
Pork	22-	Pork pork, nfs; ground dehydrated chops steaks, cutlets ham roasts Canadian bacon bacon, salt pork other pork items pork baby food	Also includes the average portion of grain mixtures (i.e., 1.12 percent) and the average portion of meat mixtures (i.e., 2.22 percent) made up by pork.
Game	233-	Game	
Poultry	24-	Poultry chicken turkey duck other poultry poultry baby food	Also includes the average portion of grain mixtures (i.e., 1.12 percent) and the average portion of meat mixtures (i.e., 7.78 percent) made up by poultry.
INDIVIDUAL GRAINS			
Breads	51- 52-	breads, rolls, muffins, bagel, biscuits, corn bread tortillas	
Sweets	53-	cakes, cookies, pies, pastries, doughnuts, breakfast bars, coffee cakes	
Snacks	54-	crackers, salty snacks, popcorn, pretzels	
Breakfast Foods	55-	pancakes, waffles, french toast	
Pasta	561-	macaroni, noodles, spaghetti	
Cooked Cereals	56200- 56201- 56202- 56203- 56206- 56207- 56208- 56209- 56210-		Includes grits, oatmeal, cornmeal mush, millet, etc.
Rice	56204- 56205-		Includes all varieties of rice.
Ready-to-eat Cereals	570- 571- 572- 573- 574- 576-		Includes all varieties of ready-to-eat cereals.
Baby Cereals	578-	baby cereals	

TABLE 3B-1 FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA (CONTINUED)

Food Product	Food Codes	
	FRUIT CATEGORIES	
Citrus Fruits	61- Citrus Fruits and Juices 6720500 Orange Juice, baby food 6723050 Orange/carrot baby juice	63403150 Lime souffle 6721100 Orange-Apple-Banana Juice, baby food Includes some citrus mixtures.
Other Fruits	62- Dried Fruits 63- Other Fruits 64- Fruit Juices and Nectars Excluding Citrus 671- Fruits, baby 67202- Apple Juice, baby 67203- Baby Juices 67204- Baby Juices 67212- Baby Juices	67213- Baby Juices 672300 Apple sweet potato juice 6725- Baby Juice 673- Baby Fruits 674- Baby Fruits 675- Apples with meat Includes some mixtures (i.e., salads, baby foods).
Apples	6210110 Apples, dried, uncooked 6210115 Apples, dried, uncooked, low sodium 6210120 Apples, dried, cooked, NS as to sweetener 6210122 Apples, dried, cooked, unsweetened 6210123 Apples, dried, cooked, with sugar 6210130 Apple chips 6310100 Apples, raw 6310111 Applesauce, NS as to sweetener 6310112 Applesauce, unsweetened 6310113 Applesauce with sugar 6310114 Applesauce with low calorie sweetener 6310115 Applesauce/other fruits 6310121 Apples, cooked or canned with syrup 6310131 Apple, baked NS as to sweetener 6310132 Apple, baked, unsweetened 6310133 Apple, baked with sugar 6310141 Apple rings, fried 6310142 Apple, pickled 6310150 Apple, fried 634010 Apple/other fruit salad 6340106 Apple, candied 6410101 Apple cider 6410401 Apple juice 6410405 Apple juice with vitamin C 6410409 Apple juice with calcium 6410415 Apple-cherry juice 6410420 Apple-pear juice	6410445 Apple-raspberry juice 6410450 Apple-grape juice 6710030 Applesauce, baby toddler 6710100 Apple-raspberry, baby, ns as to strained or junior 6710101 Apple-raspberry, baby, strained 6710102 Apple-raspberry, baby, junior 6710200 Applesauce baby fd., NS as to str. or jr. 6710201 Applesauce baby food, strained 6710202 Applesauce baby food, junior 67104- Applesauce & other fruit, baby 67113- Apples & pears, baby 6720200 Apple juice, baby food 6720300 Apple w/other fruit juice, baby 6720320 Apple-banana juice, baby 6720340 Apple-cherry juice, baby 6720345 Apple-cranberry juice, baby 6720350 Apple-grape juice, baby 6720360 Apple-peach juice, baby 6720370 Apple-prune juice, baby 6723000 Apple-sweet potato juice, baby food 6725005 Apple juice w/lowfat yogurt, baby food 67301- Apples & cranberries w/tapioca, baby 6740407 Apple yogurt dessert, baby, strained 67412- Dutch apple dessert, baby 675- Apples & meat, baby Includes some mixtures.
Bananas	6210710 Banana flakes, dehydrated 6210720 Banana chips 63107- Bananas, various 6340199 Banana, chocolate covered 6340201 Bana whip 6420150 Banana nectar 6710503 Banana, baby 6711500 Banana, baby	6725010 Banana juice with yogurt, baby 67308- Banana, baby 67309- Banana, baby 6740411 Banana apple dessert, baby 6740420 Banana pineapple dessert, baby 67408- Banana, baby 674041- Banana, baby
Peaches	62116- Dried Peaches 63135- Peaches 6412203 Peach Juice 6420501 Peach Nectar	67108- Peaches ,baby 6711450 Peaches, dry, baby 67405- Peach cobbler, baby 67413700 Peach yogurt dessert, baby
Pears	62119- Dried Pears 63137- Pears 6341201 Pear salad 6421501 Pear Nectar 67109- Pears, baby	6711455 Pears, dry, baby 6721200 Pear juice, baby 6412300 Pear/white grape/passion fruit juice 67114- Pear/pineapple, baby 6725020 Pear/peach juice with yogurt, baby
Strawberries	6322- Strawberries 6413250 Strawberry Juice	
Other Berries	6210910 Cranberries, dried 6320- Other Berries 6321- Other Berries 6322400 Youngberries, raw 6341101 Cranberry salad	6410460 Blackberry Juice 64105- Cranberry Juice 6740430 Blueberry yogurt dessert, baby

TABLE 3B-1 FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA (CONTINUED)

Food Product	Food Codes	
Exposed Fruits	621011- Apple, dried	6710102 Apple-raspberry, baby, junior
	621012- Apple, dried	67102- Applesauce, baby
	6210130 Apple chips	6710400 Applesauce & apricots, baby, ns as to str or jr
	62104- Apricot, dried	6710401 Applesauce & apricots, baby, strained
	62108- Currants, dried	6710402 Applesauce & apricots, baby, junior
	6210910 Cranberries, dried	6710407 Applesauce w/cherries, baby, strained
	62110- Date, dried	6710408 Applesauce w/cherries, baby, junior
	62116- Peaches, dried	6710409 Applesauce w/cherries, baby, ns str/jr
	62119- Pears, dried	67108- Peaches, baby
	62121- Plum, dried	67109- Pears, baby
	62122- Prune, dried	6711000 Prunes, baby
	62125- Raisins	6711300 Apples & pears, baby, ns as to str or jr
	63101- Apples/applesauce	6711301 Apples & pears, baby, strained
	63102- Wi-apple	6711302 Apples & pears, baby, junior
	63103- Apricots	6711450 Peaches, baby, dry
	63111- Cherries, maraschino	6711455 Pears, baby, dry
	63112- Acerola	67202- Apple Juice, baby
	63113- Cherries, sour	6720340 Apple-cherry juice, baby
	63115- Cherries, sweet	6720345 Apple-cranberry juice, baby
	63117- Currants, raw	6720350 Apple-grape juice, baby
	63123- Grapes	6720360 Apple-peach juice, baby
	6312601 Juneberry	6720370 Apple-prune juice, baby
	63131- Nectarine	6720380 White Grape Juice, baby
	63135- Peach	67212- Pear Juice, baby
	63137- Pear	6723000 Apple-sweet potato juice, baby food
	63139- Persimmons	6725005 Apple juice w/lowfat yogurt, baby food
	63143- Plum	6725020 Pear-peach juice w/lowfat yogurt, baby food
	63146- Quince	6730100 Apples & cranberries w/tapioca, baby, ns str/jr
	63147- Rhubarb/Sapodillo	6730101 Apples & cranberries w/tapioca, baby, strained
	632- Berries	6730102 Apples & cranberries w/tapioca, baby, junior
	6340101 Apple salad w/dressing (include waldorf salad)	6730400 Plums w/tapioca, baby, ns as to str/jr
	6340102 Apple & cabbage salad w/dressing	6730401 Plums w/tapioca, baby, strained
	6340103 Apple & fruit salad w/dressing	6730402 Plums w/tapioca, baby, junior
	6340106 Apple, candied (include caramel apples)	6730403 Plums, bananas & rice, baby, strained
	6340203 Prune whip	6730450 Prunes w/oatmeal, baby, strained
	6341101 Cranberry salad, congealed	6730501 Prunes w/tapioca, baby, strained
	6341201 Pear salad w/dressing	6730600 Ciruelas w/tapioca, baby
	6341500 Soup, sour cherry	6730700 Apricots w/tapioca, baby, ns as to str/jr
	64101- Apple Cider	6730701 Apricots w/tapioca, baby, strained
	64104- Apple Juice	6730702 Apricots w/tapioca, baby, junior
	6410409 Apple juice with calcium	6740407 Apple yogurt dessert, baby, strained
	64105- Cranberry Juice	6740430 Blueberry yogurt dessert, baby, strained
	64116- Grape Juice	6740455 Cherry cobbler, baby, junior
	64122- Peach Juice	6740500 Peach cobbler, baby, ns as to str/jr
	6412300 Pear-white-grape-passion fruit juice, w/added Vit. C	6740501 Peach cobbler, baby, strained
		6740502 Peach cobbler, baby, junior
	64132- Prune/Strawberry Juice	6741000 Cherry vanilla pudding, baby
	6420101 Apricot Nectar	6741200 Dutch apple dessert, baby, ns as to str/jr
	64205- Peach Nectar	6741201 Dutch apple dessert, baby, strained
	64215- Pear Nectar	6741202 Dutch apple dessert, baby, junior
	6710030 Applesauce, baby toddler	6741370 Peach yogurt dessert, baby, strained
	6710100 Apple-raspberry, baby, ns as to strained or junior	675- Apples & meat
	6710101 Apple-raspberry, baby, strained	

TABLE 3B-1 FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA (CONTINUED)

Food Product	Food Codes	
Protected Fruits	61- Citrus Fr., Juices (incl. cit. juice mixtures) 62107- Bananas, dried 62113- Figs, dried 62114- Lychees/Papayas, dried 62120- Pineapple, dried 62126- Tamarind, dried 63105- Avocado, raw 63107- Bananas 63109- Cantaloupe, Carambola 63110- Cassaba Melon 63119- Figs 63121- Genip 63125- Guava/Jackfruit, raw 6312650 Kiwi 6312651 Lychee, raw 6312660 Lychee, cooked 6312665 Loquats, raw 63127- Honeydew 63129- Mango 63133- Papaya 63134- Passion Fruit 63141- Pineapple 63145- Pomegranate 63148- Sweetsop, Soursop, Tamarind 63149- Watermelon 6340199 Banana, chocolate-covered, w/nuts 6340201 Banana whip 6340205 Fried dwarf banana w/cheese, puerto rican style 6340315 Lime souffle (include other citrus fruits) 6340801 Guacamole w/tomatoes 6340820 Guacamole w/tomatoes & chile peppers 63490901 Guacamole, nfs 64120- Papaya Juice	64121- Passion Fruit Juice 64124- Pineapple Juice 64125- Pineapple juice 64133- Watermelon Juice 6420150 Banana Nectar 64202- Cantaloupe Nectar 64203- Guava Nectar 64204- Mango Nectar 64210- Papaya Nectar 64213- Passion Fruit Nectar 64221- Soursop Nectar 6710503 Bananas, baby 6711500 Bananas, baby, dry 6720500 Orange Juice, baby 6721300 Pineapple Juice, baby 6723050 Orange-carrot juice, baby food 6725010 Banana juice w/lowfat yogurt, baby food 6730800 Bananas w/tapioca, baby, ns as to str/jr 6730801 Bananas w/tapioca, baby, strained 6730802 Bananas w/tapioca, baby, junior 6730900 Bananas & pineapple w/tapioca, baby, ns as to str/jr 6730901 Bananas & pineapple w/tapioca, baby, strained 6730902 Bananas & pineapple w/tapioca, baby, junior 6740411 Banana apple dessert, baby food, strained 6740420 Banana pineapple dessert, w/tapioca, baby 6740801 Banana pudding, baby, strained 6740850 Banana yogurt dessert, baby, strained 6741400 Pineapple dessert, baby, ns as to str/jr 6741401 Pineapple dessert, baby, strained 6741402 Pineapple dessert, baby, junior 6741410 Mango dessert w/tapioca, baby
VEGETABLE CATEGORIES		
Asparagus	7510080 Asparagus, raw 75202- Asparagus, cooked 7540101 Asparagus, creamed or with cheese	756010 Asparagus soup Does not include vegetables with meat mixtures.
Beets	72101- Beet greens 7510250 Beets, raw 752080- Beets, cooked 752081- Beets, canned 7540501 Beets, Harvard	7550021 Beets, pickled 7560110 Beet soup 76403- Beets, baby Does not include vegetable with meat mixtures.
Broccoli	722- Broccoli (all forms) 7230200 Broccoli soup (include cream of broccoli soup) 7230210 Broccoli cheese soup, prep w/milk 7230200 Broccoli soup (include cream of broccoli soup)	7514050 Broccoli salad w/cauliflower, cheese, bacon, & dressing Does not include vegetable with meat mixtures.
Cabbage	7510300 Cabbage, raw 7510400 Cabbage, Chinese, raw 7510500 Cabbage, red, raw 7514100 Cabbage salad or coleslaw 7514110 Cabbage salad or coleslaw, w/apples, raisins, dress 7514120 Cabbage salad or coleslaw, w/pineapple, dressing 7514130 Cabbage, Chinese, salad 75210- Chinese Cabbage, cooked	75211- Green Cabbage, cooked 75212- Red Cabbage, cooked 752130- Savoy Cabbage, cooked 75230- Sauerkraut, cooked 7540701 Cabbage, creamed 755025- Cabbage, pickled or in relish 7560120 Cabbage soup 7560121 Cabbage w/meat soup Does not include vegetable with meat mixtures.
Carrots	7310- Carrots (all forms) 7311140 Carrots in Sauce 7311200 Carrot Chips 735- Carrot soup	76201- Carrots, baby 7620200 Carrots & peas, baby Does not include vegetable with meat mixtures.

TABLE 3B-1 FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA (CONTINUED)

Food Product	Food Codes	
Corn	7510960 Corn, raw 7521600 Corn, cooked, NS as to color/fat added 7521601 Corn, cooked, NS as to color/fat not added 7521602 Corn, cooked, NS as to color/fat added 7521605 Corn, cooked, NS as to color/cream style 7521607 Corn, cooked, dried 7521610 Corn, cooked, yellow/NS as to fat added 7521611 Corn, cooked, yellow/fat not added 7521612 Corn, cooked, yellow/fat added 7521615 Corn, yellow, cream style 7521616 Corn, cooked, yell. & wh./NS as to fat 7521617 Corn, cooked, yell. & wh./fat not added 7521618 Corn, cooked, yell. & wh./fat added 7521619 Corn, yellow, cream style, fat added 7521620 Corn, cooked, white/NS as to fat added 7521621 Corn, cooked, white/fat not added	7521622 Corn, cooked, white/fat added 7521625 Corn, white, cream style 7521630 Corn, yellow, canned, low sodium, NS fat 7521631 Corn, yell., canned, low sod., fat not add 7521632 Corn, yell., canned, low sod., fat added 7521749 Hominy, cooked 752175- Hominy, cooked 7530301 Corn w/peppers, red or green, cooked, no fat added 7541101 Corn scalloped or pudding 7541102 Corn fritter 7541103 Corn with cream sauce 7550101 Corn relish 756040- Corn soup 76405- Corn, baby Does not include vegetable with meat mixtures.
Cucumbers	7511100 Cucumbers, raw 75142- Cucumber salads 752167- Cucumbers, cooked 7550301 Cucumber pickles, dill 7550302 Cucumber pickles, relish 7550303 Cucumber pickles, sour 7550304 Cucumber pickles, sweet	7550305 Cucumber pickles, fresh 7550307 Cucumber, Kim Chee 7550311 Cucumber pickles, dill, reduced salt 7550314 Cucumber pickles, sweet, reduced salt 7560451 Cucumber soup, cream of, w/milk Does not include vegetable with meat mixtures.
Lettuce	75113- Lettuce, raw 75143- Lettuce salad with other veg. 7514410 Lettuce, wilted, with bacon dressing 7522005 Lettuce, cooked	Does not include vegetable with meat mixtures.
Lima Beans	4110300 Lima beans, dry, cooked, ns as to added fat 4110301 Lima beans, dry, cooked, fat added 4110302 Lime beans, dry, cooked, no fat added 4121011 Stewed dry lima beans, p.r. 4130104 Lima bean soup 4160104 Lima bean soup	7510200 Lima beans, raw 752040- Lima beans, cooked 752041- Lima beans, canned 75301- Beans, lima & corn (succotash) 75402- Lima beans with sauce Does not include vegetable with meat mixtures.
Okra	7522000 Okra, cooked, NS as to fat 7522001 Okra, cooked, fat not added 7522002 Okra, cooked, fat added 7522010 Lufta, cooked (Chinese Okra)	7541450 Okra, fried 7550700 Okra, pickled Does not include vegetable with meat mixtures.
Onions	7510950 Chives, raw 7511150 Garlic, raw 7511250 Leek, raw 7511701 Onions, young green, raw 7511702 Onions, mature 7521550 Chives, dried 7521740 Garlic, cooked 7521840 Leek, cooked 7522100 Onions, mature cooked, NS as to fat added 7522101 Onions, mature cooked, fat not added 7522102 Onions, mature cooked, fat added	7522103 Onions, pearl cooked 7522104 Onions, young green cooked, NS as to fat 7522105 Onions, young green cooked, fat not added 7522106 Onions, young green cooked, fat added 7522110 Onion, dehydrated 7541501 Onions, creamed 7541502 Onion rings 75605- Leek soup 75608- Onion soup Does not include vegetable with meat mixtures.

TABLE 3B-1 FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA (CONTINUED)

Food Product	Food Codes	
Peas	413010- Cowpeas, dry, cooked 413020- Chickpeas, dry, cooked 41303- Split peas, dry, cooked 413035- Stewed green peas 4130403 Peas, dry, cooked w/pork 4130413 Cowpeas, dry, cooked w/pork 4131010 Stewed pigeon peas, p.r. 4131015 Stewed chickpeas, p.r. 4131016 Stewed chickpeas, w/potatoes, p.r. 4131020 Chickpeas, w/pig's feet, p.r. 4131021 Chickpeas, w/spanish sausage, p.r. 4131022 Fried chickpeas, p.r. 4131031 Stewed cowpeas, p.r. 4160201 Chunky pea & ham soup 4160202 Garbanzo or chickpea soup 4160203 Split pea & ham soup 4160204 Pea soup, instant type 4160205 Split pea soup 4160206 Pigeon pea asopao 4160207 Split pea soup, can, reduced sodium, w/water/rts	4160209 Split pea & ham soup, can, reduced sodium, w/water/rts 731110- & 731112- Peas & carrots 7512000 Peas, green, raw 7512775 Snowpeas, raw 75223- Peas, cowpeas, field or blackeye, cooked 75224- Peas, green, cooked 75225- Peas, pigeon, cooked 75231- Snowpeas, cooked 75315- Peas & corn onions, mushrooms, beans, or potatoes 7541650 Pea salad 7541660 Pea salad with cheese 75417- Peas, with sauce or creamed 75609- Pea soup 76409- Peas, baby 76411- Peas, creamed, baby 7650200 Peas & brown rice, baby Does not include vegetable with meat mixtures.
Peppers	7512140 Pepper, poblano, raw 7512100 Pepper, hot chili, raw 7512150 Pepper, serrano, raw 7512200 Pepper, raw 7512210 Pepper, sweet green, raw 7512220 Pepper, sweet red, raw 7512400 Pepper, banana, raw 7522600 Pepper, green, cooked, NS as to fat added 7522601 Pepper, green, cooked, fat not added 7522602 Pepper, green, cooked, fat added 7522604 Pepper, red, cooked, NS as to fat added 7522605 Pepper, red, cooked, fat not added	7522606 Pepper, red, cooked, fat added 7522609 Pepper, hot, cooked, NS as to fat added 7522610 Pepper, hot, cooked, fat not added 7522611 Pepper, hot, cooked, fat added 7530700 Green peppers & onions, cooked, fat added in cooking 7551101 Peppers, hot, sauce 7551102 Peppers, pickled 7551104 Pepper, hot pickled 7551105 Peppers, hot pickled Does not include vegetable with meat mixtures.
Pumpkin	732- Pumpkin (all forms) 733- Winter squash (all forms) 76205- Squash, baby	Does not include vegetable with meat mixtures.
Snap Beans	7510180 Beans, string, green, raw 7520498 Beans, string, cooked, NS color/fat added 7520499 Beans, string, cooked, NS color/no fat 7520500 Beans, string, cooked, NS color & fat 7520501 Beans, string, cooked, green/NS fat 7520502 Beans, string, cooked, green/no fat 7520503 Beans, string, cooked, green/fat 7520511 Beans, str., canned, low sod.,green/NS fat 7520512 Beans, str., canned, low sod.,green/no fat 7520513 Beans, str., canned, low sod.,green/fat 7520600 Beans, string, cooked, yellow/NS fat 7520601 Beans, string, cooked, yellow/no fat 7520602 Beans, string, cooked, yellow/fat 7530201 Beans, green string w/tomatoes (assume w/o fat) 7530202 Beans, green string w/onions, cooked, no fat added 7530203 Beans, green string w/chickpeas, cooked, no fat added 7530204 Beans, green string w/almonds, cooked, no fat added	7530205 Beans, green & potatoes, cooked, no fat added 7530206 Beans, green w/pinto beans, cooked, no fat added 7530207 Beans, green w/spaetzel, cooked, no fat added 7530208 Bean salad, yellow &/or green string beans 7530220 Beans, green string w/onions, ns as to added fat 7530221 Beans, green string w/onions, fat added 7530250 Beans, green & potatoes, ns as to added fat 7530251 Beans, green & potatoes, fat added 7540301 Beans, string, green, creamed 7540302 Beans, string, green, w/mushroom sauce 7540401 Beans, string, yellow, creamed 7550011 Beans, string, green, pickled 7640100 Beans, green, string, baby 7640101 Beans, green, string, baby, str. 7640102 Beans, green, string, baby, junior 7640103 Beans, green, string, baby, creamed 7640106 Beans, green string, baby Does not include vegetable with meat mixtures.
Tomatoes	74- Tomatoes and Tomato Mixtures raw, cooked, juices, sauces, mixtures, soups, sandwiches	Also includes the average portion of grain mixtures (i.e., 16.85 percent) and the average portion of meat mixtures (i.e., 11.11 percent) made up by tomatoes.
White Potatoes	71- White Potatoes and PR Starchy Veg. baked, boiled, chips, sticks, creamed, scalloped, au gratin, fried, mashed, stuffed, puffs, salad, recipes, soups, Puerto Rican starchy vegetables	76420000 Potatoes, baby Also includes the average portion of meat mixtures (i.e., 3.33 percent) made up by meats.
Dark Green Vegetables	72- Dark Green Vegetables all forms leafy, nonleafy, dk. gr. veg. soups	

TABLE 3B-1 FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA (CONTINUED)

Food Product	Food Codes			
Deep Yellow Vegetables	73-	Deep Yellow Vegetables all forms carrots, pumpkin, squash, sweet potatoes, dp. yell. veg. soups		
Other Vegetables	75-	Other Vegetables all forms		
Exposed Vegetables	721-	Dark Green Leafy Veg.	7514800	Cob salad w/dressing
	722-	Dark Green Nonleafy Veg.	7520060	Algae, dried
	7230200	Broccoli soup (include cream of broccoli soup)	75201-	Artichoke, cooked
	7230210	Broccoli cheese soup, prep w/milk	75202-	Asparagus, cooked
	7230500	Escarole soup	75203-	Bamboo shoots, cooked
	7230600	Watercress broth w/shrimp	752049-	Beans, string, cooked
	7230700	Spinach soup	75205-	Beans, green, cooked/canned
	7230800	Dark-green leafy vegetable soup w/meat, oriental	75206-	Beans, yellow, cooked/canned
	7230850	Dark-green leafy vegetable soup, meatless, oriental	75207-	Bean Sprouts, cooked
	74-	Tomatoes and Tomato Mixtures	752085-	Breadfruit
	7510050	Alfalfa Sprouts	752087-	Broccoflower, cooked
	7510075	Artichoke, Jerusalem, raw	752090-	Brussel Sprouts, cooked
	7510080	Asparagus, raw	75210-	Cabbage, Chinese, cooked
	75101-	Beans, sprouts and green, raw	75211-	Cabbage, green, cooked
	7510260	Broccoflower, raw	75212-	Cabbage, red, cooked
	7510275	Brussel Sprouts, raw	752130-	Cabbage, savoy, cooked
	7510280	Buckwheat Sprouts, raw	75214-	Cauliflower
	7510300	Cabbage, raw	75215-	Celery, Chives, Christophine (chayote)
	7510400	Cabbage, Chinese, raw	752167-	Cucumber, cooked
	7510500	Cabbage, Red, raw	752170-	Eggplant, cooked
	7510700	Cauliflower, raw	752171-	Fern shoots
	7510900	Celery, raw	752172-	Fern shoots
	7510950	Chives, raw	752173-	Flowers of sesbania, squash or lily
	7510955	Cilantro, raw	7521801	Kohlrabi, cooked
	7511100	Cucumber, raw	75219-	Mushrooms, cooked
	7511120	Eggplant, raw	75220-	Okra/lettuce, cooked
	7511200	Kohlrabi, raw	7522116	Palm Hearts, cooked
	75113-	Lettuce, raw	7522121	Parsley, cooked
	7511500	Mushrooms, raw	75226-	Peppers, pimento, cooked
	7511900	Parsley	75230-	Sauerkraut, cooked/canned
	7512100	Pepper, hot chili	75231-	Snowpeas, cooked
	75122-	Peppers, raw	75232-	Seaweed
	7512400	Pepper, banana, raw	75233-	Summer Squash
	7512750	Seaweed, raw	7530201	Beans, green string w/tomatoes (assume w/o fat)
	7512775	Snowpeas, raw	7530202	Beans, green string w/onions, no fat added
	75128-	Summer Squash, raw	7530203	Beans, green string w/chickpeas, cooked, no fat added
	7513210	Celery Juice		
	7514050	Broccoli salad w/cauliflower, cheese, bacon, dressing	7530204	Beans, green string w/almonds, cooked, no fat added
	7514100	Cabbage or cole slaw	7530205	Beans, green & potatoes, cooked, no fat added
	7514110	Cabbage salad or coleslaw w/apples/raisins, dressing	7530206	Beans, green w/pinto beans, cooked, no fat added
	7514120	Cabbage salad or coleslaw w/pineapple, dressing	7530207	Beans, green w/spaetzel, cooked, no fat added
	7514130	Chinese Cabbage Salad	7530208	Bean salad, yellow &/or green string beans
	7514150	Celery with cheese	7530220	Beans, green string w/onions, ns as to added fat
	75142-	Cucumber salads	7530221	Beans, green string w/onions, fat added
	75143-	Lettuce salads	7530250	Beans, green & potatoes, ns as to added fat
	7514410	Lettuce, wilted with bacon dressing	7530251	Beans, green & potatoes, fat added
	7514500	Seven-layer salad (lettuce, mayo, cheese, egg, peas)	7530601	Eggplant in tom sauce, cooked, no fat added
	7514600	Greek salad	7530700	Green peppers & onions, cooked, fat added in cooking
	7514700	Spinach salad		

TABLE 3B-1 FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA (CONTINUED)

Food Product	Food Codes	
Exposed Vegetables (continued)	7531600 Squash, summer & onions, cooked, no fat added 7531601 Zucchini w/tom sauce, cooked, no fat added in cooking 7531602 Squash, summer & onions, cooked, fat added 7540050 Artichokes, stuffed 7540101 Asparagus, creamed or with cheese 75403- Beans, green with sauce 75404- Beans, yellow with sauce 7540601 Brussel Sprouts, creamed 7540701 Cabbage, creamed 75409- Cauliflower, creamed 75410- Celery/Chiles, creamed 75412- Eggplant, fried, with sauce, etc. 75413- Kohlrabi, creamed 75414- Mushrooms, Okra, fried, stuffed, creamed 754180- Squash, baked, fried, creamed, etc. 7541822 Christophine, creamed 7550011 Beans, pickled 7550051 Celery, pickled 7550201 Cauliflower, pickled 755025- Cabbage, pickled 7550301 Cucumber pickles, dill 7550302 Cucumber pickles, relish 7550303 Cucumber pickles, sour 7550304 Cucumber pickles, sweet 7550305 Cucumber pickles, fresh 7550307 Cucumber, Kim Chee 7550308 Eggplant, pickled 7550311 Cucumber pickles, dill, reduced salt	7550314 Cucumber pickles, sweet, reduced salt 7550500 Mushrooms, pickled 7550700 Okra, pickled 75510- Olives 7551101 Peppers, hot 7551102 Peppers, pickled 7551104 Peppers, hot pickled 7551301 Seaweed, pickled 7553500 Zucchini, pickled 756010- Asparagus soup 756012- Cabbage soup 756020- Cauliflower soup, cream of, w/milk 756030- Celery soup 7560451 Cucumber soup, cream of, w/milk 756046- Gazpacho 75607- Mushroom soup 7561201 Zucchini soup, cream of, prep w/milk 7564700 Seaweed soup 76102- Dark Green Veg., baby 76401- Beans, baby (excl. most soups & mixtures) 7660400 Broccoli & chicken, baby, strained 7661150 Green beans & turkey, baby, strained 7731601 Stuffed cabbage w/meat, p.r. (repollo relleno con carne) 7731651 Stuffed cabbage w/meat & rice, syrian dish, puerto rican style 7731660 Eggplant and meat casserole 7756301 Puerto rican stew (sancocho) Does not include vegetable with meat mixtures.
Protected Veg.	411-, 412-, 413- Beans and lentils 414- Soy products 415-, 416- Bean meals 7185-, 7190- Plantains soups etc. 732- Pumpkin 733- Winter Squash 7510200 Lima Beans, raw 7510550 Cactus, raw 7510960 Corn, raw 7512000 Peas, raw 7520070 Aloe vera juice 752040- Lima Beans, cooked 752041- Lima Beans, canned 7520829 Bitter Melon 752083- Bitter Melon, cooked 7520950 Burdock 752131- Cactus 752160- Corn, cooked 752161- Corn, yellow, cooked 752162- Corn, white, cooked 752163- Corn, canned 7521749 Hominy 752175- Hominy 75223- Peas, cowpeas, field or blackeye, cooked 75224- Peas, green, cooked 75225- Peas, pigeon, cooked 75301- Succotash 7531500 Peas & corn, cooked, ns as to added fat 7531501 Peas & corn, cooked, no fat added	7531502 Peas & corn, cooked, fat added 7531510 Peas & onions, cooked, ns as to added fat 7531511 Peas & onions, cooked, fat not added 7531512 Peas & onions, cooked, fat added 7531521 Peas w/mushrooms, cooked, no fat added 7531525 Cowpeas w/snap beans, cooked, no fat added in cooking 7531530 Peas & potatoes, cooked, no fat added in cooking 75402- Lima Beans with sauce 75411- Corn, scalloped, fritter, with cream 7541650 Pea salad 7541660 Pea salad with cheese 75417- Peas, with sauce or creamed 7550101 Corn relish 7560401 Corn soup, cream of, w/milk 7560402 Corn soup, cream of, prepared w/water 7560900 Pea soup, nfs 7560901 Pea soup, prep w/milk 7560802 Pea soup, prepared w/water 7560905 Pea soup, prepared w/water, low sodium 7560906 Pea soup, prepared w/lowfat milk 76205- Squash, yellow, baby 76405- Corn, baby 76409- Peas, baby 76411- Peas, creamed, baby 7650200 Peas and brown rice, baby 7720121 Green plantain w/cracklings, p.r. (Mofongo) 7720511 Ripe plantain fritters, p.r. (Pionono) 7720561 Ripe plantainmeat pie, p.r. (Pinon) Does not include vegetable with meat mixtures.

TABLE 3B-1 FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA (CONTINUED)

Food Product	Food Codes	
Root Vegetables	710-, 711-, 712-, 713-, 714-, 715-, 716-, 717-, 7180-, 1793-, 7194-, 7195-, 7196-, 7198- White Potatoes and Puerto Rican St. Veg. 7310- Carrots 7311140 Carrots in sauce 7311200 Carrot chips 734- Sweet potatoes 7510250 Beets, raw 7511150 Garlic, raw 7511180 Jicama (yambean), raw 7511250 Leeks, raw 75117- Onions, raw 7512500 Radish, raw 7512700 Rutabaga, raw 7512900 Turnip, raw 752080- Beets, cooked 752081- Beets, canned 7521362 Cassava 7521740 Garlic, cooked 7521771 Horseradish 7521840 Leek, cooked 7521850 Lotus root 752210- Onions, cooked 7522110 Onions, dehydrated 752220- Parsnips, cooked 75227- Radishes, cooked 75228- Rutabaga, cooked 75229- Salsify, cooked 75234- Turnip, cooked 75235- Water Chestnut	7540501 Beets, harvard 75415- Onions, creamed, fried 7541601 Parsnips, creamed 7541810 Turnips, creamed 7550021 Beets, pickled 7550309 Horseradish 7551201 Radishes, pickled 7553403 Turnip, pickled 7560110 Beet soup (borscht) 7560501 Leek soup, cream of, prep w/milk 7560503 Leek soup, made from dry mix 7560801 Onion soup, cream of, prep w/milk 7560803 Onion soup, cream of, canned, undiluted 7560810 Onion soup, french 7560820 Onion soup, made from dry mix 7560830 Onion soup, dry mix, not reconstituted 76201- Carrots, baby 76209- Sweet potatoes, baby 76403- Beets, baby 7642000 Potatoes, baby 7660200 Carrots & beef, baby, strained 7712101 Fried stuffed potatoes, p.r. (Rellenos de papas) 7712111 Potato & ham fritters, p.r. (frituras de papa y jamon) 7714101 Potato chicken pie, p.r. (Pastelon de pollo) 7723021 Cassava pasteles, p.r. (Pasteles de yuca) 7723051 Cassava pie stuffed w/crab meat, p.r. 7725011 Stuffed tannier fritters, p.r. (Alcapurrias) 7725071 Tannier fritters, p.r. (Frituras de yautia) Does not include vegetable with meat mixtures.
FAT CATEGORIES		
Animal Fat	81201- Bacon grease 81202- Lard 812032- Shortening, animal 8133011 Lard	
Butter	811005- Butter 81101- Butter 81105- Butter 81204- Clarified butter 8132200 Honey butter	
Dressing	83100- 83101- 83102- 83103- 83104- 83105- 83106- 8311- 83200- 83201-	83202- 83203- 83205- 83206- 83207- 83208- 83209- 83210- 83220-
Margarine	81102- 81103- 81104- 81106-	
Mayonnaise	83204- 83107- 83108-	
Sauce	81301– Lemon butter sauce 81302- Sauces, various 81312- Tartar sauce	

TABLE 3B-1 FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1994-96 USDA CSFII DATA (CONTINUED)

Food Product	Food Codes			
Vegetable Oil	812031-	Shortening, vegetable	82104-	Olive oil
	81324-	Lechithin	82105-	Peanut, rapeseed, & canola oil
	8133021	Adobo fresco	82106-	Safflower oil
	82101-	Vegetable oil	82107-	Sesame oil
	82102-	Corn oil	82108-	Soy and sunflower oil
	82103-	Cottonseed & flax seed oil	82109-	Wheat germ oil

APPENDIX 3C

SAMPLE CALCULATION OF MEAN DAILY FAT INTAKE BASED ON CDC (1994) DATA

Sample Calculation of Mean Daily Fat Intake Based on CDC (1994) Data

CDC (1994) provided data on the mean daily total food energy intake (TFEI) and the mean percentages of TFEI from total dietary fat grouped by age and gender. The overall mean daily TFEI was 2,095 kcal for the total population and 34 percent (or 82 g) of their TFEI was from total dietary fat (CDC, 1994). Based on this information, the amount of fat per kcal was calculated as shown in the following example.

$$0.34 \times 2{,}095 \ \frac{\text{kcal}}{\text{day}} \times X \ \frac{\text{g-fat}}{\text{day}} = 82 \ \frac{\text{g-fat}}{\text{day}}$$

$$\therefore \ X = 0.12 \ \frac{\text{g-fat}}{\text{kcal}}$$

where 0.34 is the fraction of fat intake, 2,095 is the total food intake, and X is the conversion factor from kcal/day to g-fat/day.

Using the conversion factor shown above (i.e., 0.12 g-fat/kcal) and the information on the mean daily TFEI and percentage of TFEI for the various age/gender groups, the daily fat intake was calculated for these groups. An example of obtaining the grams of fat from the daily TFEI (1,591 kcal/day) for children ages 3-5 and their percent TFEI from total dietary fat (33 percent) is as follows:

$$1{,}591 \ \frac{\text{kcal}}{\text{day}} \times 0.33 \times 0.12 \ \frac{\text{g-fat}}{\text{kcal}} = 63 \ \frac{\text{g-fat}}{\text{day}}$$

APPENDIX 3D

FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA

Food Product	Household Code/Definition	Individual Code
	MAJOR FOOD GROUPS	
Total Fruits	50- Fresh Fruits citrus other vitamin-C rich other fruits 512- Commercially Canned Fruits 522- Commercially Frozen Fruits 533- Canned Fruit Juice 534- Frozen Fruit Juice 535- Aseptically Packed Fruit Juice 536- Fresh Fruit Juice 542- Dried Fruits (includes baby foods)	6- Fruits citrus fruits and juices dried fruits other fruits fruits/juices & nectar fruit/juices baby food (includes baby foods)
Total Vegetables	48- Potatoes, Sweetpotatoes 49- Fresh Vegetables dark green deep yellow tomatoes light green other 511- Commercially Canned Vegetables 521- Commercially Frozen Vegetables 531- Canned Vegetable Juice 532- Frozen Vegetable Juice 537- Fresh Vegetable Juice 538- Aseptically Packed Vegetable Juice 541- Dried Vegetables (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures/dinners)	7- Vegetables (all forms) white potatoes & PR starchy dark green vegetables deep yellow vegetables tomatoes and tom. mixtures other vegetables veg. and mixtures/baby food veg. with meat mixtures (includes baby foods; mixtures, mostly vegetables)
Total Meats	44- Meat beef pork veal lamb mutton goat game lunch meat mixtures 451- Poultry (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	20- Meat, type not specified 21- Beef 22- Pork 23- Lamb, veal, game, carcass meat 24- Poultry 25- Organ meats, sausages, lunchmeats, meat spreads (excludes meat, poultry, and fish with non-meat items; frozen plate meals; soups and gravies with meat, poultry and fish base; and gelatin-based drinks; includes baby foods)
Total Dairy	40- Milk Equivalent fresh fluid milk processed milk cream and cream substitutes frozen desserts with milk cheese dairy-based dips (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners)	1- Milk and Milk Products milk and milk drinks cream and cream substitutes milk desserts, sauces, and gravies cheeses (includes regular fluid milk, human milk, imitation milk products, yogurt, milk-based meal replacements, and infant formulas)
Total Fish	452- Fish, Shellfish various species fresh, frozen, commercial, dried (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners)	26- Fish, Shellfish various species and forms (excludes meat, poultry, and fish with non-meat items; frozen plate meals; soups and gravies with meat, poultry and fish base; and gelatin-based drinks)

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA (cont'd)

Food Product	Household Code/Definition	Individual Code
	INDIVIDUAL FOODS	
White Potatoes	4811- White Potatoes, fresh 4821- White Potatoes, commercially canned 4831- White Potatoes, commercially frozen 4841- White Potatoes, dehydrated 4851- White Potatoes, chips, sticks, salad (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners)	71- White Potatoes and PR Starchy Veg. baked, boiled, chips, sticks, creamed, scalloped, au gratin, fried, mashed, stuffed, puffs, salad, recipes, soups, Puerto Rican starchy vegetables (does not include vegetables soups; vegetable mixtures; or vegetable with meat mixtures)
Peppers	4913- Green/Red Peppers, fresh 5111201 Sweet Green Peppers, commercially canned 5111202 Hot Chili Peppers, commercially canned 5211301 Sweet Green Peppers, commercially frozen 5211302 Green Chili Peppers, commercially frozen 5211303 Red Chili Peppers, commercially frozen 5413112 Sweet Green Peppers, dry 5413113 Red Chili Peppers, dry (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners)	7512100 Pepper, hot chili, raw 7512200 Pepper, raw 7512210 Pepper, sweet green, raw 7512220 Pepper, sweet red, raw 7522600 Pepper, green, cooked, NS as to fat added 7522601 Pepper, green, cooked, fat not added 7522602 Pepper, green, cooked, fat added 7522604 Pepper, red, cooked, NS as to fat added 7522605 Pepper, red, cooked, fat not added 7522606 Pepper, red, cooked, fat added 7522609 Pepper, hot, cooked, NS as to fat added 7522610 Pepper, hot, cooked, fat not added 7522611 Pepper, hot, cooked, fat added 7551101 Peppers, hot, sauce 7551102 Peppers, pickled (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures)
Onions	4953- Onions, Garlic, fresh onions chives garlic leeks 5114908 Garlic Pulp, raw 5114915 Onions, commercially canned 5213722 Onions, commercially frozen 5213723 Onions with Sauce, commercially frozen 5413103 Chives, dried 5413105 Garlic Flakes, dried 5413110 Onion Flakes, dried (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners)	7510950 Chives, raw 7511150 Garlic, raw 7511250 Leek, raw 7511701 Onions, young green, raw 7511702 Onions, mature 7521550 Chives, dried 7521740 Garlic, cooked 7522100 Onions, mature cooked, NS as to fat added 7522101 Onions, mature cooked, fat not added 7522102 Onions, mature cooked, fat added 7522103 Onions, pearl cooked 7522104 Onions, young green cooked, NS as to fat 7522105 Onions, young green cooked, fat not added 7522106 Onions, young green cooked, fat added 7522110 Onion, dehydrated 7541501 Onions, creamed 7541502 Onion rings
Corn	4956- Corn, fresh 5114601 Yellow Corn, commercially canned 5114602 White Corn, commercially canned 5114603 Yellow Creamed Corn, commercially canned 5114604 White Creamed Corn, commercially canned 5114605 Corn on Cob, commercially canned 5114607 Hominy, canned 5115306 Low Sodium Corn, commercially canned 5115307 Low Sodium Cr. Corn, commercially canned 5213501 Yellow Corn on Cob, commercially frozen 5213502 Yellow Corn off Cob, commercially frozen 5213503 Yell. Corn with Sauce, commercially frozen 5213504 Corn with other Veg., commercially frozen 5213505 White Corn on Cob, commercially frozen 5213506 White Corn off Cob, commercially frozen	7510960 Corn, raw 7521600 Corn, cooked, NS as to color/fat added 7521601 Corn, cooked, NS as to color/fat not added 7521602 Corn, cooked, NS as to color/fat added 7521605 Corn, cooked, NS as to color/cream style 7521607 Corn, cooked, dried 7521610 Corn, cooked, yellow/NS as to fat added 7521611 Corn, cooked, yellow/fat not added 7521612 Corn, cooked, yellow/fat added 7521615 Corn, yellow, cream style 7521616 Corn, cooked, yell. & wh./NS as to fat 7521617 Corn, cooked, yell. & wh./fat not added 7521618 Corn, cooked, yell. & wh./fat added 7521619 Corn, yellow, cream style, fat added 7521620 Corn, cooked, white/NS as to fat added

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA (cont'd)

Food Product	Household Code/Definition	Individual Code
Corn (cont.)	5213507 Wh. Corn with Sauce, commercially frozen 5413104 Corn, dried 5413106 Hominy, dry 5413603 Corn, instant baby food (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby food)	7521621 Corn, cooked, white/fat not added 7521622 Corn, cooked, white/fat added 7521625 Corn, white, cream style 7521630 Corn, yellow, canned, low sodium, NS fat 7521631 Corn, yell., canned, low sod., fat not add 7521632 Corn, yell., canned, low sod., fat added 7521749 Hominy, cooked 752175- Hominy, cooked 7541101 Corn scalloped or pudding 7541102 Corn fritter 7541103 Corn with cream sauce 7550101 Corn relish 76405- Corn, baby (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures; includes baby food)
Apples	5031- Apples, fresh 5122101 Applesauce with sugar, commercially canned 5122102 Applesauce without sugar, comm. canned 5122103 Apple Pie Filling, commercially canned 5122104 Apples, Applesauce, baby/jr., comm. canned 5122106 Apple Pie Filling, Low Cal., comm. canned 5223101 Apple Slices, commercially frozen 5332101 Apple Juice, canned 5332102 Apple Juice, baby, Comm. canned 5342201 Apple Juice, comm. frozen 5342202 Apple Juice, home frozen 5352101 Apple Juice, aseptically packed 5362101 Apple Juice, fresh 5423101 Apples, dried (includes baby food; except mixtures)	6210110 Apples, dried, uncooked 6210115 Apples, dried, uncooked, low sodium 6210120 Apples, dried, cooked, NS as to sweetener 6210122 Apples, dried, cooked, unsweetened 6210123 Apples, dried, cooked, with sugar 6310100 Apples, raw 6310111 Applesauce, NS as to sweetener 6310112 Applesauce, unsweetened 6310113 Applesauce with sugar 6310114 Applesauce with low calorie sweetener 6310121 Apples, cooked or canned with syrup 6310131 Apple, baked NS as to sweetener 6310132 Apple, baked, unsweetened 6310133 Apple, baked with sugar 6310141 Apple rings, fried 6310142 Apple, pickled 6310150 Apple, fried 6340101 Apple, salad 6340106 Apple, candied 6410101 Apple cider 6410401 Apple juice 6410405 Apple juice with vitamin C 6710200 Applesauce baby fd., NS as to str. or jr. 6710201 Applesauce baby food, strained 6710202 Applesauce baby food, junior 6720200 Apple juice, baby food (includes baby food; except mixtures)
Tomatoes	4931- Tomatoes, fresh 5113- Tomatoes, commercially canned 5115201 Tomatoes, low sodium, commercially canned 5115202 Tomato Sauce, low sodium, comm. canned 5115203 Tomato Paste, low sodium, comm. canned 5115204 Tomato Puree, low sodium, comm. canned 5311- Canned Tomato Juice and Tomato Mixtures 5321- Frozen Tomato Juice 5371- Fresh Tomato Juice 5381102 Tomato Juice, aseptically packed 5413115 Tomatoes, dry 5614- Tomato Soup 5624- Condensed Tomato Soup 5654- Dry Tomato Soup (does not include mixtures, and ready-to-eat dinners)	74- Tomatoes and Tomato Mixtures raw, cooked, juices, sauces, mixtures, soups, sandwiches

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA (cont'd)

Food Product	Household Code/Definition	Individual Code
Snap Beans	4943- Snap or Wax Beans, fresh 5114401 Green or Snap Beans, commercially canned 5114402 Wax or Yellow Beans, commercially canned 5114403 Beans, baby/jr., commercially canned 5115302 Green Beans, low sodium, comm. canned 5115303 Yell. or Wax Beans, low sod., comm. canned 5213301 Snap or Green Beans, comm. frozen 5213302 Snap or Green w/sauce, comm. frozen 5213303 Snap or Green Beans w/other veg., comm. fr. 5213304 Sp. or Gr. Beans w/other veg./sc., comm. fr. 5213305 Wax or Yell. Beans, comm. frozen (does not include soups, mixtures, and ready-to-eat dinners; includes baby foods)	7510180 Beans, string, green, raw 7520498 Beans, string, cooked, NS color/fat added 7520499 Beans, string, cooked, NS color/no fat 7520500 Beans, string, cooked, NS color & fat 7520501 Beans, string, cooked, green/NS fat 7520502 Beans, string, cooked, green/no fat 7520503 Beans, string, cooked, green/fat 7520511 Beans, str., canned, low sod.,green/NS fat 7520512 Beans, str., canned, low sod.,green/no fat 7520513 Beans, str., canned, low sod.,green/fat 7520600 Beans, string, cooked, yellow/NS fat 7520601 Beans, string, cooked, yellow/no fat 7520602 Beans, string, cooked, yellow/fat 7540301 Beans, string, green, creamed 7540302 Beans, string, green, w/mushroom sauce 7540401 Beans, string, yellow, creamed 7550011 Beans, string, green, pickled 7640100 Beans, green, string, baby 7640101 Beans, green, string, baby, str. 7640102 Beans, green, string, baby, junior 7640103 Beans, green, string, baby, creamed (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures; includes baby foods)
Beef	441- Beef (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	21- Beef beef, nfs beef steak beef oxtails, neckbones, ribs roasts, stew meat, corned, brisket, sandwich steaks ground beef, patties, meatballs other beef items beef baby food (excludes meat, poultry, and fish with non-meat items; frozen plate meals; soups and gravies with meat, poultry and fish base; and gelatin-based drinks; includes baby food)
Pork	442- Pork (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	22- Pork pork, nfs; ground dehydrated chops steaks, cutlets ham roasts Canadian bacon bacon, salt pork other pork items pork baby food (excludes meat, poultry, and fish with non-meat items; frozen plate meals; soups and gravies with meat, poultry and fish base; and gelatin-based drinks; includes baby food)
Game	445- Variety Meat, Game (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	233- Game (excludes meat, poultry, and fish with non-meat items; frozen plate meals; soups and gravies with meat, poultry and fish base; and gelatin-based drinks)

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA (cont'd)

Food Product	Household Code/Definition	Individual Code
Poultry	451- Poultry (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	24- Poultry chicken turkey duck other poultry poultry baby food (excludes meat, poultry, and fish with non-meat items; frozen plate meals; soups and gravies with meat, poultry and fish base; and gelatin-based drinks; includes baby food)
Eggs	46- Eggs (fresh equivalent) fresh processed eggs, substitutes (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	3- Eggs eggs egg mixtures egg substitutes eggs baby food froz. meals with egg as main ingred. (includes baby foods)
Broccoli	4912- Fresh Broccoli (and home canned/froz.) 5111203 Broccoli, comm. canned 52112- Comm. Frozen Broccoli (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	722- Broccoli (all forms) (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures)
Carrots	4921- Fresh Carrots (and home canned/froz.) 51121- Comm. Canned Carrots 5115101 Carrots, Low Sodium, Comm. Canned 52121- Comm. Frozen Carrots 5312103 Comm. Canned Carrot Juice 5372102 Carrot Juice Fresh 5413502 Carrots, Dried Baby Food (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	7310- Carrots (all forms) 7311140 Carrots in Sauce 7311200 Carrot Chips 76201- Carrots, baby (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures; includes baby foods except mixtures)
Pumpkin	4922- Fresh Pumpkin, Winter Squash (and home canned/froz.) 51122- Pumpkin/Squash, Baby or Junior, Comm. Canned 52122- Winter Squash, Comm. Frozen 5413504 Squash, Dried Baby Food (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	732- Pumpkin (all forms) 733- Winter squash (all forms) 76205- Squash, baby (does not include vegetable soups; vegetables mixtures; or vegetable with meat mixtures; includes baby foods)
Asparagus	4941- Fresh Asparagus (and home canned/froz.) 5114101 Comm. Canned Asparagus 5115301 Asparagus, Low Sodium, Comm. Canned 52131- Comm. Frozen Asparagus (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	7510080 Asparagus, raw 75202- Asparagus, cooked 7540101 Asparagus, creamed or with cheese (does not include vegetable soups; vegetables mixtures, or vegetable with meat mixtures)
Lima Beans	4942- Fresh Lima and Fava Beans (and home canned/froz.) 5114204 Comm. Canned Mature Lima Beans 5114301 Comm. Canned Green Lima Beans 5115304 Comm. Canned Low Sodium Lima Beans 52132- Comm. Frozen Lima Beans 54111- Dried Lima Beans 5411306 Dried Fava Beans (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures; does not include succotash)	7510200 Lima Beans, raw 752040- Lima Beans, cooked 752041- ima Beans, canned 75402- Lima Beans with sauce (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures; does not include succotash)

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA (cont'd)

Food Product	Household Code/Definition	Individual Code
Cabbage	4944- Fresh Cabbage (and home canned/froz.) 4958601 Sauerkraut, home canned or pkgd 5114801 Sauerkraut, comm. canned 5114904 Comm. Canned Cabbage 5114905 Comm. Canned Cabbage (no sauce; incl. baby) 5115501 Sauerkraut, low sodium., comm. canned 5312102 Sauerkraut Juice, comm. canned (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	7510300 Cabbage, raw 7510400 Cabbage, Chinese, raw 7510500 Cabbage, red, raw 7514100 Cabbage salad or coleslaw 7514130 Cabbage, Chinese, salad 75210- Chinese Cabbage, cooked 75211- Green Cabbage, cooked 75212- Red Cabbage, cooked 752130- Savoy Cabbage, cooked 75230- Sauerkraut, cooked 7540701 Cabbage, creamed 755025- Cabbage, pickled or in relish (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures)
Lettuce	4945- Fresh Lettuce, French Endive (and home canned/froz.) (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	75113- Lettuce, raw 75143- Lettuce salad with other veg. 7514410 Lettuce, wilted, with bacon dressing 7522005 Lettuce, cooked (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures)
Okra	4946- Fresh Okra (and home canned/froz.) 5114914 Comm. Canned Okra 5213720 Comm. Frozen Okra 5213721 Comm. Frozen Okra with Oth. Veg. & Sauce (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	7522000 Okra, cooked, NS as to fat 7522001 Okra, cooked, fat not added 7522002 Okra, cooked, fat added 7522010 Lufta, cooked (Chinese Okra) 7541450 Okra, fried 7550700 Okra, pickled (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures)
Peas	4947- Fresh Peas (and home canned/froz.) 51147- Comm Canned Peas (incl. baby) 5115310 Low Sodium Green or English Peas (canned) 5115314 Low Sod. Blackeye, Gr. or Imm. Peas (canned) 5114205 Blackeyed Peas, comm. canned 52134- Comm. Frozen Peas 5412- Dried Peas and Lentils (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	7512000 Peas, green, raw 7512775 Snowpeas, raw 75223- Peas, cowpeas, field or blackeye, cooked 75224- Peas, green, cooked 75225- Peas, pigeon, cooked 75231- Snowpeas, cooked 7541650 Pea salad 7541660 Pea salad with cheese 75417- Peas, with sauce or creamed 76409- Peas, baby 76411- Peas, creamed, baby (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures; includes baby foods except mixtures)
Cucumbers	4952- Fresh Cucumbers (and home canned/froz.) (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	7511100 Cucumbers, raw 75142- Cucumber salads 752167- Cucumbers, cooked 7550301 Cucumber pickles, dill 7550302 Cucumber pickles, relish 7550303 Cucumber pickles, sour 7550304 Cucumber pickles, sweet 7550305 Cucumber pickles, fresh 7550307 Cucumber, Kim Chee 7550311 Cucumber pickles, dill, reduced salt 7550314 Cucumber pickles, sweet, reduced salt (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures)

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA (cont'd)

Food Product	Household Code/Definition	Individual Code
Beets	4954- Fresh Beets (and home canned/froz.) 51145- Comm. Canned Beets (incl. baby) 5115305 Low Sodium Beets (canned) 5213714 Comm. Frozen Beets 5312104 Beet Juice (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	7510250 Beets, raw 752080- Beets, cooked 752081- Beets, canned 7540501 Beets, harvard 7550021 Beets, pickled 76403- Beets, baby (does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures; includes baby foods except mixtures)
Strawberries	5022- Fresh Strawberries 5122801 Comm. Canned Strawberries with sugar 5122802 Comm. Canned Strawberries without sugar 5122803 Canned Strawberry Pie Filling 5222- Comm. Frozen Strawberries (does not include ready-to-eat dinners; includes baby foods except mixtures)	6322- Strawberries 6413250 Strawberry Juice (includes baby food; except mixtures)
Other Berries	5033- Fresh Berries Other than Strawberries 5122804 Comm. Canned Blackberries with sugar 5122805 Comm. Canned Blackberries without sugar 5122806 Comm. Canned Blueberries with sugar 5122807 Comm. Canned Blueberries without sugar 5122808 Canned Blueberry Pie Filling 5122809 Comm. Canned Gooseberries with sugar 5122810 Comm. Canned Gooseberries without sugar 5122811 Comm. Canned Raspberries with sugar 5122812 Comm. Canned Raspberries without sugar 5122813 Comm. Canned Cranberry Sauce 5122815 Comm. Canned Cranberry-Orange Relish 52233- Comm. Frozen Berries (not strawberries) 5332404 Blackberry Juice (home and comm. canned) 5423114 Dried Berries (not strawberries) (does not include ready-to-eat dinners; includes baby foods except mixtures)	6320- Other Berries 6321- Other Berries 6341101 Cranberry salad 6410460 Blackberry Juice 64105- Cranberry Juice (includes baby food; except mixtures)
Peaches	5036- Fresh Peaches 51224- Comm. Canned Peaches (incl. baby) 5223601 Comm. Frozen Peaches 5332405 Home Canned Peach Juice 5423105 Dried Peaches (baby) 5423106 Dried Peaches (does not include ready-to-eat dinners; includes baby foods except mixtures)	62116- Dried Peaches 63135- Peaches 6412203 Peach Juice 6420501 Peach Nectar 67108- Peaches,baby 6711450 Peaches, dry, baby (includes baby food; except mixtures)
Pears	5037- Fresh Pears 51225- Comm. Canned Pears (incl. baby) 5332403 Comm. Canned Pear Juice, baby 5362204 Fresh Pear Juice 5423107 Dried Pears (does not include ready-to-eat dinners; includes baby foods except mixtures)	62119- Dried Pears 63137- Pears 6341201 Pear salad 6421501 Pear Nectar 67109- Pears, baby 6711455 Pears, dry, baby (includes baby food; except mixtures)
EXPOSED/PROTECTED FRUITS/VEGETABLES, ROOT VEGETABLES		
Exposed Fruits	5022- Strawberries, fresh 5023101 Acerola, fresh 5023401 Currants, fresh 5031- Apples/Applesauce, fresh 5033- Berries other than Strawberries, fresh 5034- Cherries, fresh 5036- Peaches, fresh	62101- Apple, dried 62104- Apricot, dried 62108- Currants, dried 62110- Date, dried 62116- Peaches, dried 62119- Pears, dried 62121- Plum, dried

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA (cont'd)

Food Product	Household Code/Definition	Individual Code
Exposed Fruits (cont.)	5037- Pears, fresh 50381- Apricots, Nectarines, Loquats, fresh 5038305 Dates, fresh 50384- Grapes, fresh 50386- Plums, fresh 50387- Rhubarb, fresh 5038805 Persimmons, fresh 5038901 Sapote, fresh 51221- Apples/Applesauce, canned 51222- Apricots, canned 51223- Cherries, canned 51224- Peaches, canned 51225- Pears, canned 51228- Berries, canned 5122903 Grapes with sugar, canned 5122904 Grapes without sugar, canned 5122905 Plums with sugar, canned 5122906 Plums without sugar, canned 5122907 Plums, canned, baby 5122911 Prunes, canned, baby 5122912 Prunes, with sugar, canned 5122913 Prunes, without sugar, canned 5122914 Raisin Pie Filling 5222- Frozen Strawberries 52231- Apples Slices, frozen 52233- Berries, frozen 52234- Cherries, frozen 52236- Peaches, frozen 52239- Rhubarb, frozen 53321- Canned Apple Juice 53322- Canned Grape Juice 5332402 Canned Prune Juice 5332403 Canned Pear Juice 5332404 Canned Blackberry Juice 5332405 Canned Peach Juice 53421- Frozen Grape Juice 5342201 Frozen Apple Juice, comm. fr. 5342202 Frozen Apple Juice, home fr. 5352101 Apple Juice, asep. packed 5352201 Grape Juice, asep. packed 5362101 Apple Juice, fresh 5362202 Apricot Juice, fresh 5362203 Grape Juice, fresh 5362204 Pear Juice, fresh 5362205 Prune Juice, fresh 5421- Dried Prunes 5422- Raisins, Currants, dried 5423101 Dry Apples 5423102 Dry Apricots 5423103 Dates without pits 5423104 Dates with pits 5423105 Peaches, dry, baby 5423106 Peaches, dry 5423107 Pears, dry 5423114 Berries, dry 5423115 Cherries, dry (includes baby foods)	62122- Prune, dried 62125- Raisins 63101- Apples/applesauce 63102- Wi-apple 63103- Apricots 63111- Cherries, maraschino 63112- Acerola 63113- Cherries, sour 63115- Cherries, sweet 63117- Currants, raw 63123- Grapes 6312601 Juneberry 63131- Nectarine 63135- Peach 63137- Pear 63139- Persimmons 63143- Plum 63146- Quince 63147- Rhubarb/Sapodillo 632- Berries 64101- Apple Cider 64104- Apple Juice 64105- Cranberry Juice 64116- Grape Juice 64122- Peach Juice 64132- Prune/Strawberry Juice 6420101 Apricot Nectar 64205- Peach Nectar 64215- Pear Nectar 67102- Applesauce, baby 67108- Peaches, baby 67109- Pears, baby 6711450 Peaches, baby, dry 6711455 Pears, baby, dry 67202- Apple Juice, baby 6720380 White Grape Juice, baby 67212- Pear Juice, baby (includes baby foods/juices except mixtures; excludes fruit mixtures)
Protected Fruits	501- Citrus Fruits, fresh 5021- Cantaloupe, fresh 5023201 Mangoes, fresh 5023301 Guava, fresh	61- Citrus Fr., Juices (incl. cit. juice mixtures) 62107- Bananas, dried 62113- Figs, dried 62114- Lychees/Papayas, dried

Food Product	Household Code/Definition	Individual Code
Protected Fruits (cont.)	5023601 Kiwi, fresh 5023701 Papayas, fresh 5023801 Passion Fruit, fresh 5032- Bananas, Plantains, fresh 5035- Melons other than Cantaloupe, fresh 50382- Avocados, fresh 5038301 Figs, fresh 5038302 Figs, cooked 5038303 Figs, home canned 5038304 Figs, home frozen 50385- Pineapple, fresh 5038801 Pomegranates, fresh 5038902 Cherimoya, fresh 5038903 Jackfruit, fresh 5038904 Breadfruit, fresh 5038905 Tamarind, fresh 5038906 Carambola, fresh 5038907 Longan, fresh 5121- Citrus, canned 51226- Pineapple, canned 5122901 Figs with sugar, canned 5122902 Figs without sugar, canned 5122909 Bananas, canned, baby 5122910 Bananas and Pineapple, canned, baby 5122915 Litchis, canned 5122916 Mangos with sugar, canned 5122917 Mangos without sugar, canned 5122918 Mangos, canned, baby 5122920 Guava with sugar, canned 5122921 Guava without sugar, canned 5122923 Papaya with sugar, canned 5122924 Papaya without sugar, canned 52232- Bananas, frozen 52235- Melon, frozen 52237- Pineapple, frozen 5331- Canned Citrus Juices 53323- Canned Pineapple Juice 5332408 Canned Papaya Juice 5332410 Canned Mango Juice 5332501 Canned Papaya Concentrate 5341- Frozen Citrus Juice 5342203 Frozen Pineapple Juice 5351- Citrus and Citrus Blend Juices, asep. packed 5352302 Pineapple Juice, asep. packed 5361- Fresh Citrus and Citrus Blend Juices 5362206 Papaya Juice, fresh 5362207 Pineapple-Coconut Juice, fresh 5362208 Mango Juice, fresh 5362209 Pineapple Juice, fresh 5423108 Pineapple, dry 5423109 Papaya, dry 5423110 Bananas, dry 5423111 Mangos, dry 5423117 Litchis, dry 5423118 Tamarind, dry 5423119 Plantain, dry (includes baby foods)	62120- Pineapple, dried 62126- Tamarind, dried 63105- Avocado, raw 63107- Bananas 63109- Cantaloupe, Carambola 63110- Cassaba Melon 63119- Figs 63121- Genip 63125- Guava/Jackfruit, raw 6312650 Kiwi 6312651 Lychee, raw 6312660 Lychee, cooked 63127- Honeydew 63129- Mango 63133- Papaya 63134- Passion Fruit 63141- Pineapple 63145- Pomegranate 63148- Sweetsop, Soursop, Tamarind 63149- Watermelon 64120- Papaya Juice 64121- Passion Fruit Juice 64124- Pineapple Juice 64133- Watermelon Juice 6420150 Banana Nectar 64202- Cantaloupe Nectar 64203- Guava Nectar 64204- Mango Nectar 64210- Papaya Nectar 64213- Passion Fruit Nectar 64221- Soursop Nectar 6710503 Bananas, baby 6711500 Bananas, baby, dry 6720500 Orange Juice, baby 6721300 Pineapple Juice, baby (includes baby foods/juices except mixtures; excludes fruit mixtures)
Exposed Vegetable	491- Fresh Dark Green Vegetables 493- Fresh Tomatoes 4941- Fresh Asparagus 4943- Fresh Beans, Snap or Wax	721- Dark Green Leafy Veg. 722- Dark Green Nonleafy Veg. 74- Tomatoes and Tomato Mixtures 7510050 Alfalfa Sprouts

Food Product	Household Code/Definition	Individual Code
Exposed Vegetable (cont.)	4944- Fresh Cabbage	7510075 Artichoke, Jerusalem, raw
	4945- Fresh Lettuce	7510080 Asparagus, raw
	4946- Fresh Okra	75101- Beans, sprouts and green, raw
	49481- Fresh Artichokes	7510275 Brussel Sprouts, raw
	49483- Fresh Brussel Sprouts	7510280 Buckwheat Sprouts, raw
	4951- Fresh Celery	7510300 Cabbage, raw
	4952- Fresh Cucumbers	7510400 Cabbage, Chinese, raw
	4955- Fresh Cauliflower	7510500 Cabbage, Red, raw
	4958103 Fresh Kohlrabi	7510700 Cauliflower, raw
	4958111 Fresh Jerusalem Artichokes	7510900 Celery, raw
	4958112 Fresh Mushrooms	7510950 Chives, raw
	4958113 Mushrooms, home canned	7511100 Cucumber, raw
	4958114 Mushrooms, home frozen	7511120 Eggplant, raw
	4958118 Fresh Eggplant	7511200 Kohlrabi, raw
	4958119 Eggplant, cooked	75113- Lettuce, raw
	4958120 Eggplant, home frozen	7511500 Mushrooms, raw
	4958200 Fresh Summer Squash	7511900 Parsley
	4958201 Summer Squash, cooked	7512100 Pepper, hot chili
	4958202 Summer Squash, home canned	75122- Peppers, raw
	4958203 Summer Squash, home frozen	7512750 Seaweed, raw
	4958402 Fresh Bean Sprouts	7512775 Snowpeas, raw
	4958403 Fresh Alfalfa Sprouts	75128- Summer Squash, raw
	4958504 Bamboo Shoots	7513210 Celery Juice
	4958506 Seaweed	7514100 Cabbage or cole slaw
	4958508 Tree Fern, fresh	7514130 Chinese Cabbage Salad
	4958601 Sauerkraut	7514150 Celery with cheese
	5111- Dark Green Vegetables (all are exposed)	75142- Cucumber salads
	5113- Tomatoes	75143- Lettuce salads
	5114101 Asparagus, comm. canned	7514410 Lettuce, wilted with bacon dressing
	51144- Beans, green, snap, yellow, comm. canned	7514600 Greek salad
	5114704 Snow Peas, comm. canned	7514700 Spinach salad
	5114801 Sauerkraut, comm. canned	7520600 Algae, dried
	5114901 Artichokes, comm. canned	75201- Artichoke, cooked
	5114902 Bamboo Shoots, comm. canned	75202- Asparagus, cooked
	5114903 Bean Sprouts, comm. canned	75203- Bamboo shoots, cooked
	5114904 Cabbage, comm. canned	752049- Beans, string, cooked
	5114905 Cabbage, comm. canned, no sauce	75205- Beans, green, cooked/canned
	5114906 Cauliflower, comm. canned, no sauce	75206- Beans, yellow, cooked/canned
	5114907 Eggplant, comm. canned, no sauce	75207- Bean Sprouts, cooked
	5114913 Mushrooms, comm. canned	752085- Breadfruit
	5114914 Okra, comm. canned	752090- Brussel Sprouts, cooked
	5114918 Seaweeds, comm. canned	75210- Cabbage, Chinese, cooked
	5114920 Summer Squash, comm. canned	75211- Cabbage, green, cooked
	5114923 Chinese or Celery Cabbage, comm. canned	75212- Cabbage, red, cooked
	51152- Tomatoes, canned, low sod.	752130- Cabbage, savoy, cooked
	5115301 Asparagus, canned, low sod.	75214- Cauliflower
	5115302 Beans, Green, canned, low sod.	75215- Celery, Chives, Christophine (chayote)
	5115303 Beans, Yellow, canned, low sod.	752167- Cucumber, cooked
	5115309 Mushrooms, canned, low sod.	752170- Eggplant, cooked
	51154- Greens, canned, low sod.	752171- Fern shoots
	5115501 Sauerkraut, low sodium	752172- Fern shoots
	5211- Dark Gr. Veg., comm. frozen (all exp.)	752173- Flowers of sesbania, squash or lily
	52131- Asparagus, comm. froz.	7521801 Kohlrabi, cooked
	52133- Beans, snap, green, yellow, comm. froz.	75219- Mushrooms, cooked
	5213407 Peapods, comm froz.	75220- Okra/lettuce, cooked
	5213408 Peapods, with sauce, comm froz.	7522116 Palm Hearts, cooked
	5213409 Peapods, with other veg., comm froz.	7522121 Parsley, cooked
	5213701 Brussel Sprouts, comm. froz.	75226- Peppers, pimento, cooked
	5213702 Brussel Sprouts, comm. froz. with cheese	75230- Sauerkraut, cooked/canned
	5213703 Brussel Sprouts, comm. froz. with other veg.	75231- Snowpeas, cooked
	5213705 Cauliflower, comm. froz.	75232- Seaweed

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA (cont'd)

Food Product	Household Code/Definition		Individual Code	
Exposed Vegetable (cont.)	5213706	Cauliflower, comm. froz. with sauce	75233-	Summer Squash
	5213707	Cauliflower, comm. froz. with other veg.	7540050	Artichokes, stuffed
	5213708	Caul., comm. froz. with other veg. & sauce	7540101	Asparagus, creamed or with cheese
	5213709	Summer Squash, comm. froz.	75403-	Beans, green with sauce
	5213710	Summer Squash, comm. froz. with other veg.	75404-	Beans, yellow with sauce
	5213716	Eggplant, comm. froz.	7540601	Brussel Sprouts, creamed
	5213718	Mushrooms with sauce, comm. froz.	7540701	Cabbage, creamed
	5213719	Mushrooms, comm. froz.	75409-	Cauliflower, creamed
	5213720	Okra, comm. froz.	75410-	Celery/Chiles, creamed
	5213721	Okra, comm. froz., with sauce	75412-	Eggplant, fried, with sauce, etc.
	5311-	Canned Tomato Juice and Tomato Mixtures	75413-	Kohlrabi, creamed
	5312102	Canned Sauerkraut Juice	75414-	Mushrooms, Okra, fried, stuffed, creamed
	5321-	Frozen Tomato Juice	754180-	Squash, baked, fried, creamed, etc.
	5371-	Fresh Tomato Juice	7541822	Christophine, creamed
	5381102	Aseptically Packed Tomato Juice	7550011	Beans, pickled
	5413101	Dry Algae	7550051	Celery, pickled
	5413102	Dry Celery	7550201	Cauliflower, pickled
	5413103	Dry Chives	755025-	Cabbage, pickled
	5413109	Dry Mushrooms	7550301	Cucumber pickles, dill
	5413111	Dry Parsley	7550302	Cucumber pickles, relish
	5413112	Dry Green Peppers	7550303	Cucumber pickles, sour
	5413113	Dry Red Peppers	7550304	Cucumber pickles, sweet
	5413114	Dry Seaweed	7550305	Cucumber pickles, fresh
	5413115	Dry Tomatoes	7550307	Cucumber, Kim Chee
	(does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)		7550308	Eggplant, pickled
			7550311	Cucumber pickles, dill, reduced salt
			7550314	Cucumber pickles, sweet, reduced salt
			7550500	Mushrooms, pickled
			7550700	Okra, pickled
			75510-	Olives
			7551101	Peppers, hot
			7551102	Peppers,pickled
			7551301	Seaweed, pickled
			7553500	Zucchini, pickled
			76102-	Dark Green Veg., baby
			76401-	Beans, baby (excl. most soups & mixtures)
Protected Vegetable	4922-	Fresh Pumpkin, Winter Squash	732-	Pumpkin
	4942-	Fresh Lima Beans	733-	Winter Squash
	4947-	Fresh Peas	7510200	Lima Beans, raw
	49482-	Fresh Soy Beans	7510550	Cactus, raw
	4956-	Fresh Corn	7510960	Corn, raw
	4958303	Succotash, home canned	7512000	Peas, raw
	4958304	Succotash, home frozen	7520070	Aloe vera juice
	4958401	Fresh Cactus (prickly pear)	752040-	Lima Beans, cooked
	4958503	Burdock	752041-	Lima Beans, canned
	4958505	Bitter Melon	7520829	Bitter Melon
	4958507	Horseradish Tree Pods	752083-	Bitter Melon, cooked
	51122-	Comm. Canned Pumpkin and Squash (baby)	7520950	Burdock
	51142-	Beans, comm. canned	752131-	Cactus
	51143-	Beans, lima and soy, comm. canned	752160-	Corn, cooked
	51146-	Corn, comm. canned	752161-	Corn, yellow, cooked
	5114701	Peas, green, comm. canned	752162-	Corn, white, cooked
	5114702	Peas, baby, comm. canned	752163-	Corn, canned
	5114703	Peas, blackeye, comm. canned	7521749	Hominy
	5114705	Pigeon Peas, comm. canned	752175-	Hominy
	5114919	Succotash, comm. canned	75223-	Peas, cowpeas, field or blackeye, cooked
	5115304	Lima Beans, canned, low sod.	75224-	Peas, green, cooked
	5115306	Corn, canned, low sod.	75225-	Peas, pigeon, cooked
	5115307	Creamed Corn, canned, low sod.	75301-	Succotash
	511531-	Peas and Beans, canned, low sod.	75402-	Lima Beans with sauce

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA (cont'd)

Food Product	Household Code/Definition		Individual Code	
Protected Vegetable (cont.)	52122-	Winter Squash, comm. froz.	75411-	Corn, scalloped, fritter, with cream
	52132-	Lima Beans, comm. froz.	7541650	Pea salad
	5213401	Peas, gr., comm. froz.	7541660	Pea salad with cheese
	5213402	Peas, gr., with sauce, comm. froz.	75417-	Peas, with sauce or creamed
	5213403	Peas, gr., with other veg., comm. froz.	7550101	Corn relish
	5213404	Peas, gr., with other veg., comm. froz.	76205-	Squash, yellow, baby
	5213405	Peas, blackeye, comm froz.	76405-	Corn, baby
	5213406	Peas, blackeye, with sauce, comm froz.	76409-	Peas, baby
	52135-	Corn, comm. froz.	76411-	Peas, creamed, baby
	5213712	Artichoke Hearts, comm. froz.	(does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures)	
	5213713	Baked Beans, comm. froz.		
	5213717	Kidney Beans, comm. froz.		
	5213724	Succotash, comm. froz.		
	5411-	Dried Beans		
	5412-	Dried Peas and Lentils		
	5413104	Dry Corn		
	5413106	Dry Hominy		
	5413504	Dry Squash, baby		
	5413603	Dry Creamed Corn, baby		
	(does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)			
Rooted Vegetable	48-	Potatoes, Sweetpotatoes	71-	White Potatoes and Puerto Rican St. Veg.
	4921-	Fresh Carrots	7310-	Carrots
	4953-	Fresh Onions, Garlic	7311140	Carrots in sauce
	4954-	Fresh Beets	7311200	Carrot chips
	4957-	Fresh Turnips	734-	Sweetpotatoes
	4958101	Fresh Celeriac	7510250	Beets, raw
	4958102	Fresh Horseradish	7511150	Garlic, raw
	4958104	Fresh Radishes, no greens	7511180	Jicama (yambean), raw
	4958105	Radishes, home canned	7511250	Leeks, raw
	4958106	Radishes, home frozen	75117-	Onions, raw
	4958107	Fresh Radishes, with greens	7512500	Radish, raw
	4958108	Fresh Salsify	7512700	Rutabaga, raw
	4958109	Fresh Rutabagas	7512900	Turnip, raw
	4958110	Rutabagas, home frozen	752080-	Beets, cooked
	4958115	Fresh Parsnips	752081-	Beets, canned
	4958116	Parsnips, home canned	7521362	Cassava
	4958117	Parsnips, home frozen	7521740	Garlic, cooked
	4958502	Fresh Lotus Root	7521771	Horseradish
	4958509	Ginger Root	7521850	Lotus root
	4958510	Jicama, including yambean	752210-	Onions, cooked
	51121-	Carrots, comm. canned	7522110	Onions, dehydrated
	51145-	Beets, comm. canned	752220-	Parsnips, cooked
	5114908	Garlic Pulp, comm. canned	75227-	Radishes, cooked
	5114910	Horseradish, comm. prep.	75228-	Rutabaga, cooked
	5114915	Onions, comm. canned	75229-	Salsify, cooked
	5114916	Rutabagas, comm. canned	75234-	Turnip, cooked
	5114917	Salsify, comm. canned	75235-	Water Chestnut
	5114921	Turnips, comm. canned	7540501	Beets, harvard
	5114922	Water Chestnuts, comm. canned	75415-	Onions, creamed, fried
	51151-	Carrots, canned, low sod.	7541601	Parsnips, creamed
	5115305	Beets, canned, low sod.	7541810	Turnips, creamed
	5115502	Turnips, low sod.	7550021	Beets, pickled
	52121-	Carrots, comm. froz.	7550309	Horseradish
	5213714	Beets, comm. froz.	7551201	Radishes, pickled
	5213722	Onions, comm. froz.	7553403	Turnip, pickled
	5213723	Onions, comm. froz., with sauce	76201-	Carrots, baby
	5213725	Turnips, comm. froz.	76209-	Sweetpotatoes, baby
	5312103	Canned Carrot Juice	76403-	Beets, baby
	5312104	Canned Beet Juice	(does not include vegetable soups; vegetable mixtures; or vegetable with meat mixtures)	
	5372102	Fresh Carrot Juice		

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA (cont'd)

Food Product	Household Code/Definition	Individual Code
Root Vegetables (cont.)	5413105 Dry Garlic 5413110 Dry Onion 5413502 Dry Carrots, baby 5413503 Dry Sweet Potatoes, baby (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures)	
	USDA SUBCATEGORIES	
Dark Green Vegetables	491- Fresh Dark Green Vegetables 5111- Comm. Canned Dark Green Veg. 51154- Low Sodium Dark Green Veg. 5211- Comm. Frozen Dark Green Veg. 5413111 Dry Parsley 5413112 Dry Green Peppers 5413113 Dry Red Peppers (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures/dinners; excludes vegetable juices and dried vegetables)	72- Dark Green Vegetables all forms leafy, nonleafy, dk. gr. veg. soups
Deep Yellow Vegetables	492- Fresh Deep Yellow Vegetables 5112- Comm. Canned Deep Yellow Veg. 51151- Low Sodium Carrots 5212- Comm. Frozen Deep Yellow Veg. 5312103 Carrot Juice 54135- Dry Carrots, Squash, Sw. Potatoes (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures/dinners; excludes vegetable juices and dried vegetables)	73- Deep Yellow Vegetables all forms carrots, pumpkin, squash, sweetpotatoes, dp. yell. veg. soups
Other Vegetables	494- Fresh Light Green Vegetables 495- Fresh Other Vegetables 5114- Comm. Canned Other Veg. 51153- Low Sodium Other Veg. 51155- Low Sodium Other Veg. 5213- Comm. Frozen Other Veg. 5312102- Sauerkraut Juice 5312104- Beet Juice 5411- Dried Beans 5412- Dried Peas, Lentils 541310- Dried Other Veg. 5413114- Dry Seaweed 5413603- Dry Cr. Corn, baby (does not include soups, sauces, gravies, mixtures, and ready-to-eat dinners; includes baby foods except mixtures/dinners; excludes vegetable juices and dried vegetables)	75- Other Vegetables all forms
Citrus Fruits	501- Fresh Citrus Fruits 5121 Comm. Canned Citrus Fruits 5331 Canned Citrus and Citrus Blend Juice 5341 Frozen Citrus and Citrus Blend Juice 5351 Aseptically Packed Citrus and Citr. Blend Juice 5361 Fresh Citrus and Citrus Blend Juice (includes baby foods; excludes dried fruits)	61- Citrus Fruits and Juices 6720500 Orange Juice, baby food 6720600 Orange-Apricot Juice, baby food 6720700 Orange-Pineapple Juice, baby food 672110 Orange-Apple-Banana Juice, baby food (excludes dried fruits)
Other Fruits	62- Fresh Other Vitamin C-Rich Fruits 503- Fresh Other Fruits 5122- Comm. Canned Fruits Other than Citrus 5222- Frozen Strawberries 5332- Frozen Other than Citr. or Vitamin C-Rich Fr. 5333- Canned Fruit Juice Other than Citrus 5352- Frozen Juices Other than Citrus	5353- Dried Fruits 63 Other Fruits 64 Fruit Juices and Nectars Excluding Citrus 671 Fruits, baby 67202 Apple Juice, baby 67203 Baby Juices 67204 Baby Juices

APPENDIX 3D. FOOD CODES AND DEFINITIONS USED IN ANALYSIS OF THE 1987-88 USDA NFCS DATA (cont'd)

Food Product	Household Code/Definition	Individual Code
Other Fruits (cont.)	5362- Aseptically Packed Fruit Juice Other than Citr. 542- Fresh Fruit Juice Other than Citrus Dry Fruits (includes baby foods; excludes dried fruits)	67212 Baby Juices 67213 Baby Juices 673 Baby Fruits 674 Baby Fruits